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FRANK W. BOOTH, EDITOR

February-April, 1907.

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REPORT OF THE PROCEEDINGS

OF THE

SEVENTH SUMMER MEETING

HELD AT

THE WESTERN PENNSYLVANIA INSTITUTION FOR THE DEAF AND DUMB

EDGEWOOD PARK, PA.

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Dr. Samuel B. McCormick,
Dr. Adolph Koening,
Tilson Chickering,
Dr. Samuel H. Church,
Mrs. C. A. Dean,
Dr. Chevalier Jackson,
Herbert Y. Bellows,
Rev. John Sherrard,
L. W. Mendenhall,
George F. Grimm,
C. R. Droun,
Henry Bardes,
† Frank J. Berner,
† Edward Boyle,
† Fred Connor,
† Robert Fire,
† Ralph F. Fryer,
† William Gibson,
† Joseph Johovics,
† Reed Krotzer,
Dr. Samuel C. Schmucker,
E. R. Munro,
Dr. G. E. Curry,
Robert M. Ziegler
Katherine Fritz,
Mrs. A. U. Downing,
Alice M. Teegarden,
John S. Ramsey,
Wilbur F. Mills,
Susie E. Jones,
Katherine Bartlett,
† Albert Lenz,
† Margaret Davis,
† Bessie Bolton,
† Bertha Edmiston,
† Austa Mays,
† Mary Lucey,
† Hannah Engstrom,
† Anna Vanden Berg,
† Mary C. Smith,
† Rose Carliner,
† Jane Thornton,
† Ida Laird,
† Rosa Montana,
† Belle Kelly.

UTAH.

Mrs. Frank M. Driggs.

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* Trustee of Institution for the Deaf.
† Pupil.

ORDER OF PROCEEDINGS.

SATURDAY, AUGUST 25.

2.30 P. M. OPENING SESSION.

1. Invocation, Rev. J. E. Wright, D. D.
2. Addresses of Welcome.
   President John B. Jackson, Western Pennsylvania Institution for the Deaf.
   Dr. Wm. N. Burt, Superintendent, Western Pennsylvania Institution for the Deaf.
   Dr. Samuel Hamilton, Superintendent Allegheny County Schools.
   Dr. Samuel B. McCormick, Chancellor Western University of Pennsylvania, Pittsburg.
3. Responses:
   President of the Association, Dr. A. L. E. Crouter, Mt. Airy, Philadelphia.
   Dr. G. O. Fay, School for the Deaf, Hartford, Conn.
   Mr. Edmund Lyon, Rochester, N. Y.
   Dr. J. N. Tate, Superintendent School for the Deaf, Faribault, Minn.
   Mr. Frank M. Driggs, Principal School for the Deaf, Ogden, Utah.
   Mr. E. McK. Goodwin, Principal School for the Deaf, Morganton, North Carolina.
   Mr. Harris Taylor, School for the Deaf, Danville, Ky.
4. Organization of meeting and appointment of committees.

8.00 P. M. EVENING SESSION.

The Real Purpose of Nature Study, an address by Dr. Samuel C. Schmucker, State Normal School, West Chester, Pa.

SUNDAY, AUGUST 26.

3.00 P. M.

1. Invocation, Dr. G. O. Fay.
2. Sunday Occupations for Younger Pupils, a paper by Bessie N. Leonard, Clarke School, Northampton, Mass.
3. Sunday School Work for Intermediate Grades, a paper by Edwin G. Hurd, Rhode Island School, Providence.
4. Sunday School Work for Advanced Grades, a paper by James A. Weaver, Utah School, Ogden.
5. The Moral Training of the Young, an address by Dr. Samuel C. Schmucker, West Chester, Pa.

MONDAY, AUGUST 27.

8.30 to 9.15 a. m. (and daily thereafter at the same hour). Class work representing primary, intermediate, and advanced grades, by Pupils of the Western Pennsylvania Institution for the Deaf and by Pupils of the Illinois School.

9.30 to 11.00 A. M. OPENING SESSION.

1. Invocation, Mr. Linnaeus Roberts.

PRIMARY WORK.

2. The First Years of the Child's Life in the Institution, a paper by Emma Ross Thompson, Pennsylvania Institution, Mt. Airy, Philadelphia.
3. Primary Language, a paper by Mrs. Edwin G. Hurd, Rhode Island School, Providence.
4. Speech and Speech Reading in Primary Classes, a paper by Frances L. Glenn, Indiana School, Indianapolis, Ind.
5. Primary Arithmetic, a paper by Eliza Kent, Illinois School, Jacksonville, Ill. Class Demonstrations, by Edith Wyckoff, Illinois School.

11.00 A. M. TO 1.00 P. M. GENERAL SESSION.

1. Annual Address by President A. L. E. Crouter.
2. Defective Vision in School Children, G. E. Curry, M. D., Pittsburg.
3. Visible Speech, Caroline A. Yale, Northampton, Mass.

AFTERNOON. EXCURSIONS.

8.00 P. M. EVENING SESSION.

Illustrated Lecture: Ramblings in Rural England, Edwin Stanley Thompson, Mt. Airy, Philadelphia.

TUESDAY, AUGUST 28.

8.30 TO 9.15 A. M.

Class work by Pupils of the Western Pennsylvania Institution for the Deaf and by Pupils of the Illinois School.

9.30 TO 11.00 A. M. OPENING SESSION.

1. Invocation, Mr. N. F. Walker.

INTERMEDIATE WORK.

2. Geography and History for Intermediate Grades, a paper by Frances W. Gawith, Clarke School, Northampton, Mass.
3. Chart Stories, a talk by Caroline A. Yale.
4. Language Work in Intermediate Grades, a paper by Susan E. Bliss, Pennsylvania Institution, Mt. Airy, Philadelphia.
5. Articulation in the Intermediate Grades, a paper by Frances Wettstein, Day School for the Deaf, Milwaukee, Wisconsin.

11.00 A. M. TO 1.00 P. M. GENERAL SESSION.

1. School Sanitation and Hygiene, Adolph Koenig, M. D., Pittsburg.
2. Defects of Childhood, a paper by Richard O. Johnson, Institution for the Deaf, Indianapolis, Ind.
3. The Importance of Physical Training for Deaf Children, a paper by Grace G. Greene, Pennsylvania Institution, Mt. Airy, Philadelphia.
4. Visible Speech, Caroline A. Yale, Northampton, Mass.

AFTERNOON. EXCURSIONS.

EVENING, 8 TO 10, PUBLIC RECEPTION. 10 TO 12, DANCING.

WEDNESDAY, AUGUST 29.

8.30 TO 9.15 A. M.

Class work by Pupils of the Western Pennsylvania Institution for the Deaf and by Pupils of the Illinois School.

9.30 TO 11.00 A. M. OPENING SESSION.

1. Invocation, Dr. J. N. Tate.

ADVANCED WORK.

2. The Use of Pictures in Advanced Grades, a paper by Harris Taylor, Kentucky School for the Deaf, Danville.
3. Arithmetic: the Equation Method, a paper by A. U. Downing, Western Pennsylvania Institution, Edgewood Park.
4. Advanced Geography—Feeding the World, a paper by Edwin Stanley Thompson, Pennsylvania Institution, Mt. Airy, Philadelphia.

11.00 A. M. TO 1.00 P. M. GENERAL SESSION.

1. Visible Speech, Caroline A. Yale, Northampton, Mass.
2. Normal Training for Oral Teachers of the Deaf, F. W. Booth, Washington, D. C.
3. The Education of the Deaf-Blind, Superintendent J. W. Jones, School for the Deaf, Columbus, Ohio. Leslie Oren presented by his teacher, Miss Ada Lyon.

AFTERNOON. EXCURSIONS.

EVENING, TROLLEY RIDES, THEATRES, ETC.

THURSDAY, AUGUST 30.

8.30 TO 9.15 A. M.

Class work by Pupils of the Western Pennsylvania Institution for the Deaf and by Pupils of the Illinois School.

9.30 TO 11.00 A. M. OPENING SESSION.

1. Invocation, Mr. J. W. Jones.
2. The Proper Treatment of the Verb, a paper by Samuel G. Davidson, Pennsylvania Institution, Mt. Airy, Philadelphia.
3. What We Have Done in Our Library Clubs, a paper by Candace A. Yendes, Western Pennsylvania Institution, Edgewood Park.
4. Some Errors in Arithmetical Methods, a paper by Barton Sensenig, Pennsylvania Institution, Mt. Airy, Philadelphia.

11.00 A. M. TO 1.00 P. M. GENERAL SESSION.

1. Defective Hearing, Aids for its Improvement, Chevalier Jackson, M. D., Pittsburg.
2. Speech Work for Older Pupils, a paper by Kate H. Fish, Gallaudet College, Washington, D. C.
3. Visible Speech, Caroline A. Yale, Northampton, Mass.

AFTERNOON. EXCURSIONS.

8.00 P. M. EVENING SESSION.

Colonial Pittsburg, an address by Samuel Harden Church, Litt. D.

FRIDAY, AUGUST 31.

MORNING SESSION, 9.00 A. M.

1. Invocation, Dr. G. O. Fay.
2. How Best to Secure Intelligible Speech in Deaf Children, Mary McCowen, Chicago Normal College, Deaf Department.
3. The Classification of Pupils and Methods of Instruction Pursued in Schools for the Deaf in Denmark, Anders Hansen, Nyborg, Denmark.
4. The Education of the Deaf in Norway, Eyvind Boyesen, Agricultural School for the Deaf, Sandefjord, Norway.
5. Alexander Melville Bell, Sarah Fuller, Horace Mann School, Boston, Mass.
6. The Progress of Speech Work in Foreign Schools, Hon. John Hitz, Superintendent Volta Bureau, Washington, D. C.
7. Annual Business Meeting.
   Election of five Directors in place of Alexander Graham Bell, Mrs. Gardiner G. Hubbard, A. L. E. Crouter, Mary McCowen, and J. W. Blattner.
   Reports of Committees and other necessary business.
8. Adjournment.

PROCEEDINGS.

WESTERN PENNSYLVANIA INSTITUTION FOR THE DEAF AND DUMB, EDGEWOOD PARK, PA., 2:30 p. m., Saturday, Aug. 25, 1906.

The Seventh Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf met, at this hour, in postponed session,[1] in the chapel of the Western Pennsylvania Institution for the Education of the Deaf and Dumb. Mr. John B. Jackson, President of the Board of Directors of the Institution, presiding, called the meeting to order.

After the invocation by Rev. J. E. Wright, D. D., there followed addresses of welcome by President John B. Jackson, Dr. Wm. N. Burt, Dr. Samuel Hamilton, and Dr. Samuel B. McCormick; and addresses in response by Dr. A. L. E. Crouter, Dr. Gilbert O. Fay, Mr. Edmund Lyon, Dr. J. N. Tate, Mr. Frank M. Driggs, Mr. E. McK. Goodwin, and Mr. Harris Taylor. These addresses follow.

ADDRESS OF WELCOME.

JOHN B. JACKSON, PRESIDENT OF THE BOARD OF DIRECTORS, WESTERN PENNSYLVANIA INSTITUTION FOR THE DEAF AND DUMB.

Ladies and Gentlemen:

We are living in an age of wonderful development, at a time when we may feel that a seed planted centuries ago is now in full bloom. Yet it is hard to believe that a man is still living who saw the first locomotive, hard to believe, when we pause a moment to compare a picture of the first train of cars with a present train of Pullman coaches, a veritable town on wheels, running through the country at a speed of sixty miles or more an hour. Within our own memory the telegraph has been developed from its experimental stage to that most wonderful instrument, the telephone, whereby we may sit in an easy chair in Chicago and chat with a friend in New York. Surely Puck's promise has been more than kept, for a message has been sent round the world in less than "forty minutes." We were scarcely familiar with the telegraph and telephone when a

[1] Postponed from the dates June 27–July 3, 1906.

new development or evolution in telegraphy was flashed upon us in the wireless transmission of electric messages. And this last seems to be on the threshold of most startling results. Examples might be added in almost endless and certainly tiresome number, of inventions or discoveries, but interesting as the catalogue might be, it could hardly emphasize the fact of evolution in methods and of wonderful accomplishments.

The statement may be made without fear of contradiction, that in science, politics, and even in theology, the last century has witnessed marvelous changes, and certainly improvements. Science has brought to light many hidden things and made them minister to our comfort and happiness. Compare surgery and medicine of the Napoleonic wars with the Red Cross work of today, or compare the hospitals of fifty years ago with those of the present time to be found even in small, out of the way towns. In politics, take one example, the legal status of women; compare the woman's former subserviency to her husband with present independence of him in the control of her own property. If the rule be not universal, yet a long stride has been made in that direction, and even in China, her condition seems to be greatly improved. We may well feel proud that the States of this Republic have led in this reformation.

And what of theology? Is it unchanged, unchanging, the same yesterday, today, and forever? The divine nature cannot change, but we may believe that our visions broaden and our conceptions grow wiser. We hear now less of punishment and more of love, more of the Fatherhood of God and the brotherhood of man, than of the torments awaiting the transgressor. On all sides there would seem to be a lifting up, wiser methods, kindlier feeling. We fully realize that much remains to be done before there will be no halt, maimed, or blind, no disease; when all will enjoy health and all their senses. Disheartened as we may be when we look about us and note the suffering of our fellow-men, we cannot but feel that great strides have been made and though the vista of the future be not as full of promise as we could wish, we can yet feel hopeful, and, judging by the past, "learn to labor and to wait." The old saying that there is "No royal road to learning," seems in our day to be challenged. Witness, the kindergarten for beginners, and even advanced books are made fascinating in the new method of treatment. Spelling, once a bugbear, is now almost discarded, and reading at sight has taken its place, whether to the advantage of the student and the mature man may well be questioned.

A little more than a century ago, the children of silence were legally in the same category as idiots and madmen, and under Roman law they were considered to be incapable of consent, and consequently unable to enter into a legal obligation or contract. In France they were considered a disgrace to their parents and were kept in seclusion in convents and asylums. In this favored land, no disability attaches to the deaf-mute, and in every State, schools adapted to their infirmities have been established, the claims upon the State's bounty fully recognized, and met. Of the methods employed in educating deaf-mutes the manual alphabet seems to have reached a degree of excellence that leaves little, if anything, to be added; the only difficulty lies in the teacher's ability to impart his knowledge and the pupil's aptitude to learn.

The manual alphabet is to the deaf and dumb what the printed letters are to the hearing and speaking child, the eye and hand doing duty for the ear and mouth. Could these two organs be restored, the difficulties of the deaf would be relieved; but under existing conditions, the better the eye can be trained and the vocal organs be brought into play, the nearer the deaf-mute will be brought to that enjoyment so highly prized by the normal hearing and speaking. That the deaf-mute labors under great disadvantages cannot be denied, and, whether the discouraging results in their instruction, thus far attained, are due wholly to the pupil or to the methods, it is difficult to determine, but that it is largely owing to the latter seems to be a general opinion, judging by the large and earnest membership of "The American Association to Promote the Teaching of Speech to the Deaf," the delegates here coming from all over this wide, extended country, inspired with a zeal to study methods to overcome in a measure the infirmities of the nerveless ear and the untrained tongue.

I cannot pass this part of the subject without pausing for a moment to compliment the members of the Association upon this evidence of their love for their fellow-men. It is truly a labor of love, not one for pecuniary reward, but prompted by pity for another's woe. You are giving your time and energy to better the condition of an unfortunate class, to help raise to a higher level its members, bringing them nearer the hearing and speaking in the struggle of life, and in some measure make up for the loss of that sense, which in the normal person affords so much pleasure and is of such incalculable value.

As specialists tell us the infirmity of total deafness is incurable, we naturally seek some substitute for hearing, something that will in a measure take the place of the severed nerve. The effort made to teach the deaf-mute is ancient history, and it needs no argument to prove that if the eye could be trained to read the lips, and the lips unguided by the hearing ear to utter intelligible sounds, a great advance in the education of deaf-mutes would be accomplished.

Up to the present time the results have been far from satisfactory, as witness these large annual gatherings to study methods for promoting speech among the speechless. In these remarks we are reminded of several remarkable cases of oral accomplishments, particularly that of Miss Helen Keller, and are naturally led to inquire if the success in her case is due altogether to the pupil's wonderful natural ability, or if some credit may not be given to a patient teacher. Not for one moment, however, would I minimize Miss Kellar's personal effort. When it was my privilege to meet the lady, I looked upon her with a feeling of awe, for in her ability to read the lips, and her pleasant articulation, it did seem as if the ears had been unstopped.

In the hope that this Association may be the means of greatly furthering this important branch of education, the Board of Trustees of this Institution bids you welcome to this hall. We trust that not only will the meeting of 1906 be fruitful in good results for the deaf, but that here many pleasant acquaintances may be formed, many friendships renewed. Notwithstanding the heavy smoke clouds hanging over our "Greater Pittsburg," we hope you may yet find in our borders something worthy of your interest, and realize the truth of the old adage that every cloud has a silver lining.

ADDRESS OF WELCOME.

DR. WM. N. BURT, SUPERINTENDENT OF THE WESTERN PENNSYLVANIA INSTITUTION FOR THE DEAF AND DUMB.

In olden times when doctors were uncertain what the effect of their remedies might be, they used to first try them on the dog, usually with very disastrous results to the dog. Last night I could not sleep very well. I seemed to have this convention on my mind. Some of you may wonder at that, but Mr. Goodwin will not, and Dr. Crouter and some others will not; but I concluded after tossing about for a time that I would give an address of welcome to the Association for Promotion of Speech to the Deaf. I did so, with the most

astounding result. In less than five minutes I was fast asleep and did not awaken until this morning. I tried it on the dog with the usual success, figuratively speaking. Now, I thought this morning that perhaps it would not be well to try that speech at all. I do not want to introduce the sleeping habit so early in the convention; so I made up my mind that I would give the speech that I prepared very elaborately last June. Well, I could not for the life of me think of a single word of that speech. One fact, however, stood out very prominently in my memory, and that was this: it was a good speech, an excellent speech, and I am very sorry that you will not be able to hear it. It is one of those things that are lost to the world. There are a great many things that have been lost to the world. The poets have sung of profound thoughts that were never uttered, of beautiful songs that were never sung, of poems that were never written, and of sermons that were never preached; but the poet never wrote of the conventions that were never convened, for sooner or later they do convene, especially those of teachers and officers of schools for the deaf.

Perhaps it would not be uninteresting for me to say a few words concerning the postponement of this convention. When the measles broke out in our school, it was thought best by the members of our Board that I should go on to Philadelphia and meet the officers of the Association and see what could be done. As soon as I saw Dr. Crouter he agreed with me that it would not do to hold our meeting here. There are a great many teachers of tender age who have not had the full catalogue of infantile diseases, and then there are others you know that are so susceptible, they take anything that comes around. One of our teachers told me she had had the measles three different times. Dr. Crouter at once telegraphed to several of the officers of the Association, and the first reply, I believe, was from Dr. Bell. Dr. Bell said, "Do not give up the convention. Why not hold it at Mt. Airy?" Dr. Bell is a very wise man, but Dr. Bell does not know Philadelphia. I do not want to insinuate anything against Philadelphia, but I will tell you confidentially it is a pretty slow town. While we were enjoying the measles, the regular old-fashioned kind, the kind the Board of Health takes hold of and placards, they were having the three-day measles in Philadelphia. I really believe that if Pittsburg should have a serious outbreak of the smallpox, in about three weeks you would hear that Philadelphia has a few cases of varioloid. If Philadelphia is slow, Dr. Crouter is not. He got his pace before he went there. Then

the next from whom we heard was Dr. Westervelt. Dr. Westervelt said, "Don't postpone the convention. Why not hold it at Chautauqua?" That suggestion did not meet with very much favor. Chautauqua is a very fine place, but there are a great many women there, and it did not seem wise to take a convention made up very largely of ladies to Chautauqua, for we should be lost there, so that was passed over. Miss Yale was next heard from. Miss Yale replied,—I do not remember the exact words,—that Dr. Crouter might wrestle with the problem himself, he being on the scene; and Dr. Crouter did wrestle with it, and very successfully. A call was issued for the convention, and a large percentage of the members, who would have been here at the June convention, are here. Many more are to come tomorrow and on Monday.

I can only add a word to the welcome that our President, Mr. Jackson, has extended to you. I cordially welcome you all to our Institution and I hope that you may have a delightful time and carry away with you pleasant memories. Now, there are a great many vacancies on this program, and possibly I may be called upon for a speech later on, though I am not inviting anything of that kind; so I will make no further remarks. (Applause.)

PRESIDENT JACKSON: I think I ought to say a word of apology for some who are not here. The Hon. John Dalzell, a member of Congress from this District, and a most fluent and agreeable speaker, was invited to speak in June, and he said if he could possibly come he would; but after the June meeting was postponed, he went out to the Pacific Coast, and while he is here now, he is very busy "keeping up his fences," for they are trying very hard to tear them down and put him out of the field.

Our next speaker has come here with a great deal of personal sacrifice. He is exceedingly busy and I think we are very much indebted for the effort that he has made. I know the Board feel that, and I am sure the members of this Association will have very great pleasure in introducing Dr. Samuel Hamilton, Superintendent of the schools of Allegheny County.

ADDRESS OF WELCOME.

DR. SAMUEL HAMILTON, SUPERINTENDENT OF PUBLIC SCHOOLS, ALLEGHENY COUNTY, PA.

Mr. Chairman, Ladies and Gentlemen of the Association:

I assure you that language fails me to fully express the pleasure that I feel at looking into the faces of so many people who have consecrated themselves to a great work. The temperature of the atmosphere this afternoon, the length of the program, and the condition of my voice by reason of a severe cold suggest that what I should say to you ought to be very brief. The gentlemen who have preceded me bid you a cordial welcome in behalf of this Institution. I desire to extend to you a word of welcome in behalf of the teachers of this community whom I have the honor to represent and who will assemble next week in their annual convention in this city to the number of fifteen hundred. Pittsburg, and Pittsburg people, and those in the neighborhood are always pleased to extend to disinguished visitors a most cordial welcome and to contribute in every way possible to their pleasure while they may remain among us, so that they may have pleasant recollections of their visit in this community and may desire to return again. While they are here, such persons have everything that we can give to them: our city is theirs, our community is theirs, our libraries are theirs, our homes are theirs,—yes, and even this delicious Pittsburg atmosphere with its health, its soot and its smoke, is theirs to breathe and to enjoy.

Now, you are a body of speech teachers. I represent the teachers engaged in general educational work; and on their behalf, I extend to you a most cordial welcome. We regard you as brethren; I suppose I ought to say this afternoon as sisters. We regard you as brethren, and we extend to you a brother's welcome, a brother's congratulation, a brother's courtesy, and we trust that your stay in our midst may be as full of pleasure to you as it is of profit and inspiration to us.

The conditions that surround general educational questions always differ in the different schools. Those conditions, of course, in the kindergarten vary somewhat from the conditions in the grade school, and still those in the secondary grades differ from those in higher institutions; and yet, vastly more different are the conditions that surround the problem to which you have consecrated your lives, a problem that seems to us, the uninitiated, to be difficult

enough for a philosopher and noble enough for an angel. So while these conditions that surround the educational problem differ, after all, the ultimate purpose of the work which you have before you is precisely the purpose that we have in our general educational work. When we speak of education on behalf of the state, we say its purpose mainly is to develop good citizens; that is, develop harmoniously the powers of the individual so that he may be put in perfect harmony with his environment; that he may be able to be an active participator in all the social, intellectual, and institutional life of the state and at the same time be a worthy contributor to that life. Now, that is the general purpose. We are all consumers of the common stock of accumulated worth in the world; and he who adds nothing to that stock and draws from it is nothing better than a moral beggar, because the world grows worse through his existence; but he who contributes to that common stock of accumulated worth more than he consumes is a moral benefactor, because the world grows better through his existence.

Now, we all believe that the world is growing better simply because the gifts of the moral benefactors exceed the draught of the moral beggars. Your purpose in your school and the purpose in our school ultimately is to make of those individuals moral benefactors who otherwise might be moral beggars.

Dr. Hillis has very fittingly phrased this great purpose of education in one of his lectures. He says that, "To make great souls of good quality is the first business of the nation." That is the purpose, as he expresses it. That is the purpose of your work. That is the purpose of our work. Now, no soul can be great and at the same time of a good quality if fed on error. No soul can be great and at the same time of a good quality if made of poor material. No soul can be great and at the same time of a good quality if its best and noblest parts are not attuned to its environment in such way that it comes in contact with the best things in life. So, your purpose is simply to make great souls of good quality out of those defectives that are under your charge. And what a noble purpose it is! Noble enough, as I suggested, for the work of an angel.

But not only is your work like ours in the ultimate purpose that we must keep in view, but also in the law by which that purpose is to be attained. What is it that educates a boy in your school? What is it that educates a child in any school, in any institution? There is just one thing in the world that educates. It may be expressed in two words: Effort educates. Nothing else does. The teacher, the

school, the text-book, the lesson, are only helpful just as they stimulate and direct the individual efforts of the child. There is just one thing that trains the child and that is his own individual effort. That is as much the law of your school as it is the law of the world or the law of our school. "By the sweat of thy face," we are told, "thou shalt eat bread." That is the law of the old dispensation. That is the law of this dispensation. That will be the law of every dispensation. Success in life is either thought out or wrought out; and upon that platform all the successes of the world have been achieved. Grant tanned leather. Garfield walked the tow-path. Lincoln split rails. Franklin set type. Peter Cooper painted carriages in New York. But the carriages he painted and the efforts he made helped to found that institution that bears his name; the "rails Lincoln split fenced the way to the White House and the tow-path that Garfield trod led to the highest gift that a people could bestow on an individual." The type that Franklin set spelled out for him a name and a fame that will last as long as the language of liberty lasts; and the leather that Grant tanned helped develop that tenacity of purpose in him that enabled him to say in a great crisis "We will fight it out on this line if it takes all summer." The law of effort is the law of success in the world; and it is the law of development in your school and the law of development in our school.

As ye put forth effort, so shall ye be crowned with power. If the pupils under your care and the pupils in our schools are ever to build for themselves that most beautiful of all temples,—nobility of character, and dwell therein as a great soul of good quality, honest effort must lay the foundation, lift its walls, arch its ceilings, sculpture its marbles, tint its frescoes, round its domes, and point its spire heavenward.

The purpose in your school is precisely the same as the purpose in ours; and the law by which you are to succeed is precisely the law by which we are to succeed in the work which we have undertaken.

Over in France in one of the great art galleries there is a great picture that represents what the artist was pleased to call "The Enthronement of the Intellect." There on the canvas is a representation of a marble throne, and gathered around that throne are all the great thinkers of modern times, to typify what the artist is pleased to call "The Enthronement of the Intellect." There in that picture you can see Newton standing at one side. Newton

thought about that power that we call gravitation that holds the worlds in space as they go careering in their courses. There stands Euclid, who thought about those laws and angles that we call geometry; and there stands Beethoven, who thought about those harmonies of heaven that floated down to us from the time the morning stars sang together until the grand master of heavenly song caught the melodies and wrote them down as the oratorios of earth. There sitting around the throne are all the great thinkers that typify the Enthronement of the Intellect.

What is the purpose of your work? What is the purpose of our work? Simply this: to enthrone intellect and character in the individual committed to our care. And there is just one law by means of which that can be done. What is it? It is the law of effort.

"Knowledge comes from observing. Wisdom comes from thinking. Character comes from enduring." If the individuals in your school would have strength, they must wrestle with the things themselves. If they would have knowledge they must observe. If they would have wisdom they must think. If they would have character they must endure. That is the law and there is none other. And the exercise of this law is absolutely necessary for the struggle of life that is before them. The boat that always sails neath cloudless skies is not prepared for storms. Never! And the rugged facts of life that build into great scholarship and the rugged efforts of life that build into character are the crowns of victory that God gives to men and to women who struggle and who strive.

You are welcome this afternoon as a body of distinguished visitors in this community; but thrice welcome are you as a body of teachers who have consecrated your lives to the solution of a great problem; and on behalf of the teachers of this community we bid you God speed. We extend to you a cordial welcome; we extend to you the open hand and the open heart, and with that a brother's congratulations; and we trust that your stay in our midst, as I said before, will be as pleasant to you as it is profitable and pleasant and inspiring to us.

PRESIDENT JACKSON: I have been very much gratified this afternoon to hear several very kind remarks about our school. I suppose it is pardonable in me to say that I am quite proud of it. I have been on the Board since 1874 and take quite a lively interest in it. We are proud of it on account of its being one of the institutions of

Western Pennsylvania. We have though in Western Pennsylvania a very much older and larger and more influential institution of learning, namely, the Western University, and I have the honor this afternoon of introducing to you the Chancellor, the Rev. Dr. Samuel B. McCormick.

ADDRESS OF WELCOME.

DR. SAMUEL B. MCCORMICK, CHANCELLOR WESTERN UNIVERSITY OF PENNSYLVANIA, ALLEGHENY, PA.

I very deeply regret that the necessity of crowding all of my engagements into today has prevented my hearing the program of this afternoon excepting the latter part of that most excellent address which has just been delivered.

I imagine that a century ago or thereabouts this Western Pennsylvania must have been a very important section of the country. At any rate it has given the name to quite a number of institutions in this city and in this part of the State. The Penitentiary is one of them. I suppose that probably it is the least valuable. This institution is another. The Western University of Pennsylvania is another.

And while it is not a part of my duty (for the address which I am to deliver was to be given on Monday morning), while it is not a part of my duty to extend any further welcome, yet I am sure that in behalf of the Western University of Pennsylvania I can second the words that have been already spoken to you. I trust that those persons attending this convention who are able to do so will have a very pleasant visit to the new observatory on Tuesday afternoon which has been planned. I only regret that absence from the city will prevent my being present with the company who will visit the observatory.

I am speaking this afternoon, I am sure, to people who are in a most distinctive way engaged in work which has for its purpose the helping of people who are peculiarly in need of help. I do not know how many of you are teachers. Judging from the ratio of the sexes represented, I should consider myself in a typical teachers' gathering, excepting the Quaker meeting part of it; I notice the men are seated on the one side and the women on the other; but apart from that, it is a typical teachers' gathering.

However, whether you are engaged directly in the work of teaching, or whether you are interested in the work which this most

excellent and important Institution is doing, you are in the ranks of those people who are engaged in helping those who are particularly and peculiarly in need of help. And I take it, that when a man stands before such an audience, whether he is to speak for five minutes or fifty minutes, he is speaking to one of the choice gatherings,—people who are engaged in the very highest employment which can engage the thought and the effort of human beings.

Some years ago, when in the city of Omaha, it was my good fortune to be intimately connected with the man who was at the head of the institution there, and I became very familiar with the work of that particular institution; and I remember one thing that was said to me at that time which has been an inspiration oftentimes since. It was this: that if there is the least thing in the mind or in the hearing of the child which can be detected, recognized, upon which work can be put, then something can be done for that child. If there is just the least little spark of hearing, it may be developed, with the expectation that the child may be taught to speak. This is also a general truth, I am altogether sure, in any work of a philanthropic sort of any kind, religious, moral, intellectual, or otherwise, in which any one of us can engage. As long as there is something to work upon, something that can be recognized, something that may be developed, there is hope that all that we plan will actually be accomplished.

Not very long ago a man came to this city who had occupied places of influence on the platform and in the pulpit, who had shown great power wherever he had been, but who had fallen so low morally that when a friend placed him in one of our institutions in order that he might perhaps be benefited, he was sent away and word came back to the friend that there was no moral basis upon which to work. Yet that man is today engaged, I am told, in a most important work, himself thoroughly reclaimed morally, spiritually, in one of the cities of our country. There is hope always when there is anything upon which to work; and there is inspiration always in the hope that what we undertake may be accomplished.

Now, I shall speak to you very briefly, for my address is really out of its place, upon two or three of the inspirations that are ours, no matter to what particular line of endeavor we devote ourselves; and the first of these is, this matter of overcoming the difficulties that stand in our way. Every man in his own place meets them and he imagines that perhaps he meets them in larger form than the other person who is by his side; and yet every person, it

matters not the line of his efforts, the direction along which his life goes, is constantly meeting with obstacles that must be overcome.

In such a matter as this there are two kinds of people. The first includes those who permit difficulties, obstacles, to be their master, to discourage them in the work they undertake. The second includes those who make obstacles the means whereby they more surely attain unto the accomplishment of their purpose. I am sure that those who are engaged in work which deals with the moral, the intellectual, and the spiritual welfare of humanity need not to be reminded that an obstacle is a thing to be overcome, a thing to be put aside, or to be surmounted, and that the reason of its existence for any particular person is that that person may overcome it, surmount it, put it out of the way, and thereby make himself or herself stronger in character and in the possibilities of accomplishment than he or she could have been without the obstacle.

The other day the game of baseball between Pittsburg and Brooklyn at the end of the first half of the ninth inning was seven to one against Pittsburg. The people had gone home, most of them. The game seemed to be over. As a matter of fact, it had just begun. At the end of the ninth inning it stood seven to seven, and the game was won by Pittsburg in the next inning. Now, I do not know what value you put upon a game of baseball; but I want to tell you that that particular game was worth about $1,000 to myself. It meant this: never to learn how to be defeated. I take it, if we in our work, no matter what it may be, will just put that into our lives and learn that particular lesson, it will be worth all that it will cost us. Obstacles, difficulties, hardships, trials, no matter what they may be,—discouragements, we may call them,—are only intended to be the stepping stone to the accomplishment of something we never could have accomplished had it not been for them.

Now, a second inspiration is this: the zest of seeking to understand and live our particular lives, whatever they may be. It is comparatively easy for a person to learn how to DO something. To become a physician requires only—after the preliminary education—four years in high school, four years in college, four years in a medical college, and two years in a hospital, only fourteen years. That is not much; it is easy. It is fourteen years of effort along a certain line. To become a lawyer is comparatively easy; to become a preacher is comparatively easy; hundreds and thousands of persons become lawyers and preachers. To become a teacher—we know the process of preparation for that; it is comparatively easy to

get one's self ready to practice one's profession, to do one's particular work. That is not what I mean when I am speaking of the zest that ought to possess us as we are seeking to understand and to live our lives. It is something harder, something more complicated, something infinitely more important than to learn how to do one's work; and that is the reason why it should be an inspiration to a person who starts out with a purpose to learn what life is, and to learn how he may live it. We are in this room this afternoon, a very beautiful room, full of sunshine and good air, windows that look out upon a beautiful landscape, and everything about it good. It would be no hardship to remain just where we are day after day. But that would not be the way to live one's life. He who lives in the room today in which he lived yesterday has not started to understand what it means to live his life. To live one's life rightly is to live in a larger place tomorrow and a more beautiful place tomorrow than was possible today—more beautiful and larger because he sees and appreciates and knows more perfectly. We have come into a place that is richer in everything that makes up life if we have entered upon an understanding of what life actually is; and the interesting and inspiring thing about the individual life is not the getting ready to do one's work, is not necessarily the doing of one's work, but it is the solving of the problem of life itself as it confronts the individual who lives it. This is the real mission of the individual in the world—and his success is measured by the skill with which he interprets and realizes in full measure the glorious meaning of his own life.

Then, in the third place, I am sure there is also zest and inspiration in this: the putting joy into the work which we actually are compelled to do. Some people go along from day to day with their eyes turned to the earth; some people—most perhaps. It is not, however, the normal attitude of an intelligent soul. There must be the upward look as well as the look earthward. Many people are living their lives as much under bondage as any slave that even went to his work under the lash of the task master. The work is the thing that controls, that commands, that compels obedience, that makes the slave; and the work ought never to be task master, but always the servant of the individual soul. I am sure that no person ever gets a tremendous inspiration to accomplish large things until he comes to the place where he understands that it is within his power to put the very joy of his soul into any undertaking that engages his physical or his intellectual energy. That man has failed in his work

so far forth who has not learned the secret that the very center of his being is not the brain that thinks, but is the heart that feels; and that it is his business to put his very soul into everything that he does, so as to realize in very ecstasy the joy that ought to be his in the accomplishment of every task.

I am sure that I might multiply these inspirations which are possible for every one of us. I have mentioned just these three: the inspiration that comes through the zest in overcoming obstacles; the inspiration that comes with understanding and living one's life; and the inspiration of putting one's soul with joy into the work which he actually does. It matters not what may claim a man's attention, it matters not how hard may be his work, nor how full the day which engages his energy, it matters not where he is, nor when he lives, nor what he does, if he is learning along these lines, there is in him inspiration to go on to larger and better things tomorrow than he could do today, and an inspiration that will carry him on in the successful accomplishment of his task to the place where he can look back over his life and know that while he has accomplished much work, he has done that finer, that diviner thing—learned how to live his life for his own sake and for the glory of his God.

I wish you a most successful, interesting, and helpful convention during these coming days, and the utmost success in all your work in the future.

PRESIDENT JACKSON: I feel rather embarassed just now. So far I have had the honor of introducing the speakers on our side of the house and have had the pleasure of speaking to you myself, and now I am called upon to introduce those who respond to this welcome; and it seems almost as if I were asking for compliments, but I hope you will not put me in that position. The welcoming speeches having been made to you, the program now calls for the responses, and I have the honor of introducing your President, Dr. Crouter:

RESPONSE ON BEHALF OF THE ASSOCIATION.

DR. A. L. E. CROUTER, MT. AIRY, PHILADELPHIA, PA.

Mr. President, and Superintendent of the Western Pennsylvania Institution for the Deaf and Dumb, and Ladies and Gentlemen:

It gives me very great pleasure to acknowledge, in behalf of the American Association to Promote the Teaching of Speech to the

Deaf, your very generous and kindly words of welcome. Be assured that the sentiments you have so cordially expressed are highly appreciated by each and every member of the Association present at our meeting this afternoon, and that our stay here will be all the more enjoyed because of the hospitable spirit in which you have bidden us welcome to your doors.

The Association we represent is not an old one, having been founded but a few years ago, but it is active and energetic, and has accomplished a great work in the brief period of its existence. We come from almost every school and every state in the Union; from the east, from the west, from the north, and from the south, and from that great and growing country beyond our northern boundaries, the Dominion of Canada. Our work is, therefore, in no sense sectional in its operations, nor is it denominational or sectarian in its teachings; it embraces all parts of our country, all peoples, all faiths, and all schools. Our membership, now numbering some five hundred men and women, is drawn, not wholly from professional teachers, but from humane workers of every walk in life. We welcome to our ranks all persons interested in the great and benevolent work of teaching the deaf to speak. That was the thought, the purpose, that called our Association into being, and it is maintained today, as it has been from the date of its organization, solely with that end in view. Its platform is, therefore, as broad and liberal in its teachings as its work is humane and Christian in its operations, and any and all persons interested in humanitarian and educational movements may join us without doing violence to their personal views or prejudices as regards methods of securing mental development in deaf children. We feel, therefore, that in coming before you this afternoon in this broad and liberal spirit, we may ask at your hands that active sympathy and support in the great work in which we are engaged, that your cordial and generous words of welcome inspire us to believe you stand ready to bestow.

Mr. President, your kindly greetings, your splendid hospitality, your grand and noble buildings, twice erected and consecrated to the great work of teaching deaf children, and typifying the resistless energy of the noble city at your feet, fill us with fresh hope and inspire us to renewed effort. And not alone is your institution noted, the country over, for the excellence of its material equipment; it is recognized far and wide, by those most capable of judging, for the skill of its teaching staff, for the thoroughness of its course of study, and for the superior results attained in its various classes and de-

partments. In particular is it to be commended for the generous recognition it gives to speech and speech-work, placing as it does today more than half the attendance on its rolls under that form of instruction. Permit me, sir, to say, too, that in your excellent Superintendent, Dr. Burt, you have a man of recognized capacity as an educator and as an organizer. Our Association joins heartily in congratulating him and you and the citizens of this city on the splendid work he is accomplishing for this great school. I know of no better or fitter place in which the members of our Association could come together to take counsel as to how best they may prosecute the great work they have in hand.

We rejoice, Mr. President, in being permitted to meet in this historic region, in historic Pittsburg, whose people so happily illustrate in their energy and skill the indomitable spirit and courage of the great statesman who gave it name and position among the historic cities of the earth. To sojourn for a few days even in a city so unrivaled for her commercial successes, and humane and enlightened enterprises, will furnish the members of our Association with the liveliest and happiest recollections of hours joyously and profitably passed long after they have bidden adieu to her generous and hospitable citizens.

We appreciate the preparations we see on every hand for our entertainment and comfort, and realize quite fully the great labor and care it has occasioned your excellent and thoughtful Superintendent to arrange them. A few weeks ago, when sickness invaded your doors and threatened to prevent our coming together this year, he did not hesitate or falter as many men, less able, would have done, but taking the first train at his command, he hastened across the state, and sizing up the situation, in a twinkling, made full preparation for our meeting together, two months later, with little or no change in the original program of work. And here we are this afternoon, not a measle to be seen, and as if nothing had occurred to interrupt our former plans. And we have come, Mr. President, with grips in hand, prepared to remain with you our full time and enjoy ourselves, feeling and knowing from what we have seen and heard this afternoon that if we do not do so, the blame will be ours alone.

But there are others of our Association who, I observe, are anxiously awaiting an opportunity to respond to your splendid welcome. Before introducing them, however, I feel a word of apology is due for the keenly-felt absence of Dr. Alexander Graham Bell,

founder, first president, and now first vice-president of our Association. Dr. Bell had fully intended being present here today to join, in his own felicitous manner, in responding to the generous and hospitable sentiments to which we have been listening. But greatly to his and our regret, and doubtless, also, to yours, ill-health keeps him at his home at Bienn Bhreagh, Cape Breton Island, and I know I but voice the feelings of all present when I give expression to the depth and keenness of the disappointment over his enforced absence that we all feel. I have just received this dispatch from Dr. Bell, which explains itself:

> Regret inability to be present. I am with you in heart, and send best wishes for a successful meeting.
>
> (Signed) Graham Bell.

In the absence of Dr. Bell, we have an old and valued friend with us, and with your permission, Mr. President, I will introduce him and other speakers who are to follow. He has consented to address you briefly. He is well known to our work, one of the earliest and oldest and most successful educators of the deaf in this country. I recall him, years ago, during a brief visit to Philadelphia, when I as a young man had an opportunity to pay him some courtesy and attention. It gives me the greatest pleasure to have the opportunity to introduce him to you this afternoon to make a few remarks, Dr. Gilbert O. Fay, of the American School for the Deaf, Hartford, Conn.

RESPONSE ON BEHALF OF THE EAST.

DR. GILBERT O. FAY, HARTFORD, CONN.

Ladies and Gentlemen:

I feel as though my true function should be looking, listening, and learning myself and not furnishing words to occupy your attention and thoughts; and yet it is a pleasure to me to review briefly in your hearing what has passed in my own experience and abides in my memory.

Ninety years ago, in 1816, Dr. Mason F. Cogswell, in New England, at Hartford, in the interest of his daughter Alice, was urging the establishment and support of a permanent school for deaf-mutes. Rev. Thomas Hopkins Gallaudet was sent to England to secure the necessary assistance, and returned having with him Laurent Clerc, an expert from Paris in the teaching of the deaf.

Ninety years have since passed. At that date Mr. Gallaudet and Mr. Clerc, canvassing New England audiences, were occasionally censured by people on the ground that any allusion to deaf-mutism would increase the defect. Is there any such objection today to mentioning the condition of our deaf children? They are treated universally with love, with regard, and with attention.

At that day, Thomas Hopkins Gallaudet sought a teacher from Paris for service in this country. Would it be necessary today, after ninety years, to seek abroad a teacher for service in our institutions or in our schools for the deaf? The intelligence of this audience, the condition of our country, the reports of our institutions, and their appearance to visitors, show that we have today an ample supply of quality.

In 1862 it was my pleasure to be invited to engage in the teaching of the deaf. We taught no speech then. We used pictorial pantomime, manual spelling, books, and writing. We had no phonetic spelling; we had no speech except in the case of occasional semi-mutes.

Forty-four years have passed and today I am familiar with school room work where pupils gather to consider and observe, to study and recite, to spell written or printed English, to recite in written English and in oral speech. Is not this change progress?

Dr. Thomas Hopkins Gallaudet, Laurent Clerc and Dr. Cogswell all sleep in Hartford graves. But the work that they were engaged in has extended all over our land until now structures for the deaf do not need to be urged, but they spring up constantly in every state, all about us, in convenience, in beauty, in extent, in glory, a credit to the noble spirit of education that extends to all classes of children throughout our country, not omitting or overlooking the deaf.

Parents are not now ashamed of their deaf children. You are familiar with the old statement that the country has one deaf child to every fifteen hundred of other children. I am familiar with the fact that in the census returns of a neighboring state, thirty and forty years ago, only one-third of the children upon the catalogue of the institution ever appeared at all upon the census returns of the state or of the nation. Why? Parents were ashamed, probably, of their deaf children and would not report them to the census officers. But today, Dr. Bell tells us that we have one deaf child for every six hundred and sixty-five. Are there more in these latter days? Not more. There are really less. The sanitary care of our children, the better life of our population have rendered the

number of deaf children less in proportion, I heartily and thoroughly believe; and yet as reported, their number seems to have increased. They used really to be kept out of sight, and came with difficulty under the care of our institutions where they could be returned to the social life of their fellows.

The most difficult part of their education was, and is today, lip-reading and the teaching of oral speech. The teaching of reading, writing, and manual spelling, teaching by the use of the pencil and pen, were apparently easy, universally so, while the teaching of speech was an art of great difficulty, attended by frequent failures and by small results. But thanks to the earnest, skillful, careful, growing interest of our teachers throughout the country, great progress has been made in this art until now, at all our schools for the deaf, a large part of our children are able to express their ideas successfully in speech and to understand the thoughts of their teachers as expressed by them orally. This is progress. This is why we are gathered together today,—to compare our methods, to compare our results, to encourage one another in this most difficult department of deaf-mute education, which we all wish to become as widespread and inclusive as possible.

We should not, however, and will not, neglect any part of our deaf children, and if we have children who, not necessarily through defective intellect, are yet unable to succeed in speech, but can yet acquire through written and spelled methods, language by easier means, we will not neglect their condition, or the possibilities of their education by any other successful methods. But the method which we ourselves are studying here today, we will make as extensive and as inclusive as is possible. I will not occupy your time further. I delight to be present to learn what I can of the methods and the results of the teaching of speech, as additional to those other historical methods of pictorial pantomime, manual spelling and writing, with which we are familiar.

DR. CROUTER: I now have great pleasure in introducing one of the life members of our Association, one who has taken an active interest in its organization and work since its inception, Mr. Edmund Lyon, of Rochester, New York.

RESPONSE IN BEHALF OF THE ASSOCIATION.

EDMUND LYON, ROCHESTER, N. Y.

Mr. President, Welcoming Friends, Ladies and Gentlemen:

It is with great diffidence, a trait which I have always cultivated, that I undertake to speak on behalf of the members of the Association in response to the felicitous words of welcome and profound exposition to which we have just listened. While appreciating the luminous ray which Dr. Burt has thrown upon the perplexities connected with changing the date of the summer meeting, what he said in regard to the uncut literary gem with which he intended to regale us last June especially appealed to me, as his was an exact duplication of my own experience. I therefore had hoped against hope that Dr. Bell might be here today to take part in the performance of this pleasant office, but as that is impossible, and as the gentleman from Philadelphia has issued his mandate, I feel with some slight modification as did the famous victims of Balaklava—

Mine's not to reason why,
Mine's but to do or die,
Mine's but to make reply,
Though one has blundered.

An Irish woman on boarding a trolley car with some fifteen children of assorted sizes, was accosted by the conductor who said: "Madam, are these all your children, or is it a picnic?" To which she feelingly replied: "Yissur, they be aul my children, and it's no peeknic." The last three words of this reply came floating into my inner consciousness when I learned that I had been elected to membership in the Association's first class in articulation, and that its practice work had been set down for the opening session of the Summer Meeting. By some hokus-pokus the tentative program has been changed so as to deprive us of our Yale representative, and at the last moment I am informed that circumstances have robbed us of the unlimited resources of Johnson's Dictionary: nevertheless, it must be admitted that the class is a Goodwin so long as we have "A. L. E." constantly on draught at its head. It is to be regretted, however, that our auditors are not mind-readers as well as lip-readers, for in that event they would not be ignorant long of the friendly reciprocity and warm appreciation which at this moment fills the minds and hearts of every one here, and which, I am sure, would speak more eloquently than any words that will be heard from this side of the house to-day.

In a note, which has some of the ear-marks of a circular letter of information to the speakers, the President suggests that I indulge at some length in a historical sketch of the Association. For the peace of mind of those present I will state at once that I have decided to forego this lengthy indulgence, in the first place, out of consideration for my hearers, and for my colleagues who are fairly bursting to get some one by the ears; secondly, because I am not a historian or the father of a historian; and finally, because the contemplation of the far-reaching influence of the Association's work with its important bearing upon the intellectual awakening and molding of our deaf children persuades me that an adequate history of this Association cannot be written. The different stages and processes in the development of a flower may be sketched, but when we come to the completed purpose of its existence, who can tell of its beauty or of the sweetness of its far-reaching perfume? So while it may be interesting and even profitable to recall some of the incidents and instrumentalities connected with the growth of our Association, a history, which should cover the results of its labors, cannot be presented because it is impossible satisfactorily and adequately to determine these results. Even those who have been benefited most greatly through the influence of the Association, perhaps may simply be able to speak after the manner of Bartimæus,—this one thing I know, that whereas I was dumb, now I speak.

Without having the remarkable gifts of the aged patriarch who boasted that he could remember when the mighty elms and oaks about the old homestead were nothing but huckleberry bushes, I can recall the time when this Association was quite different from what it is at present, in size if not in texture. In fact, I can go back to the Association's inception, as I was present at its birth, although in a non-professional capacity. It was my great good fortune to be present at the Twelfth Convention of Instructors of the Deaf, held at the New York Institution in August, 1890, when Dr. Alexander Graham Bell rose to his feet and thrilled the hearts of the friends and advocates of speech-teaching by offering a $25,000 endowment to an association which should be formed to encourage the more general use of speech in the education of our deaf children. Protracted meetings were subsequently held for the purpose of selecting a name for the Association and for drafting its Magna Charta. The name was in keeping with the length of the conferences, while the proclamation of purpose was worthy of the wisdom of the devoted few who drafted it, and on the fourth of September,

1890, The American Association to Promote the Teaching of Speech to the Deaf began its legal existence with the following official declaration of its objects: "To aid schools for the deaf in their efforts to teach speech and speech-reading by providing schools for the training of articulation teachers; by the employment of an agent or agents who shall, by the collection and publication of statistics and papers relating to the subject, and by conference with teachers and others, disseminate information concerning methods of teaching speech and speech-reading, and by using all such other means as may be deemed expedient, to the end that no deaf child in America shall be allowed to grow up deaf and dumb or mute without earnest and persistent efforts having been made to teach him to speak and read the lips." The Directors named to manage the concerns of the Association for the first year were: Alexander Graham Bell, President; Gardiner G. Hubbard, 1st Vice-President; Caroline A. Yale, 2d Vice-President; Zenas F. Westervelt, Secretary; Ellen L. Barton, A. L. E. Crouter, Philip G. Gillett, David Greenberger, and Mary H. True.

The first and only struggle that the Association has had was the one for single blessedness, which occurred in 1894, when overtures looking toward a union with a sister society were presented, but which, after serious consideration, were declined. While much was urged in favor of such a coalition, it seemed on the whole for the best interests of all concerned to limit our mutual relationship to friendly co-operation, and so we decided, that "With malice toward none, with charity for all, with firmness in the right as God gives to see the right," we would finish the work of the Association in accordance with the original purpose of its organization. Since that time the Association's career has been tranquil and active, and its influence manifestly beneficent.

One reason why our ship has held so steady a course is because it has been well manned. From the outset we have had strong men and women as members of the Association and of its Board of direction, by whose wise counsels our policy has been shaped. My own qualifications were not discovered soon enough to bring me officially into contact with some of the earlier members of the Board, but it was my privilege to work side by side with that noble triumvirate, now triumphant, consisting of Dr. Joseph C. Gordon, modest and scholarly; Dr. Philip G. Gillett, fatherly, genial, and jovial; and the Hon. Gardiner G. Hubbard, stalwart, judicial, fearless yet prudent, and withal kindly. While the virtues of the pres-

ent members of the Board are for the most part too conspicuous to require cataloguing, I want to call your attention to three by name. The first is Dr. Zenas F. Westervelt, who has been the Secretary of the Association since the day of its incorporation, and whose painstaking work on the earliest publications of the Society cannot be appreciated fully by any one outside of his school circle. Not only did he give largely of his own time and thought, but again and again the entire executive force of his institution was cheerfully called into requisition for the purpose of advancing the work. In spite of unusual difficulties, Dr. Westervelt secured the highest excellence possible of attainment under the circumstances. For all these his varied services on behalf of the Association we would express our sincerest acknowledgments.

In the second place I wish to speak of the inestimable debt of gratitude which this Association and the profession at large owe Miss Caroline A. Yale for conducting Normal Classes at the Clarke Institution and for performing other valuable services at the instance of this Association, than which no larger or more convincing proof of her devotion to the cause need be sought.

I now come to the Kohinoor of our collection, and as a token of our love and loyalty I am going to ask you all to rise as I present the name of our friend and our children's friend, Dr. Alexander Graham Bell, the founder and patron saint of this Association. While we thus stand let us pour out a fervent prayer for his well-being and for the prolongation of his noble life, and let us join with it the sincere pledge that we will do what we may to hold up the hands of the great man until his great work is done. Helen Keller used to enjoy propounding the conundrum "Why can I not spell 'Cupid?' " and answering it by saying "When I come to C-U—I can go no farther." So, when I come to Dr. Bell's name I need go no farther, for you all know of the great services he has rendered this Association; you know of his large initial gift and of the thousands of dollars he has given to meet our annual needs; and finally, of his munificent bestowment of $75,000, in commemoration of his father and of his father's gift to mankind.

The work of this Association and the lives of the men and women who are and have been connected with it, give a wider and deeper significance to the commonplace expressions, "Reign of love" and "Brotherhood of man." Yet they are but part and parcel of a still deeper, a still wider tendency. If we will but read the signs of the times aright, we shall find the assurances of an ever-increas-

ing world concord, a more scriptural neighborliness, and a growing desire to mind our brother's business for our brother's good: in a word, the earnest of the condition of universal "Peace, good will toward men." I am glad to see this tendency toward concord gaining ground among the educators of the deaf. The bickerings and bitter antagonisms, which came to us as the legacy of the remote past, are softening and disappearing, and in their stead we are finding today a more generous and rational spirit of co-operation. Though some of us may be ready to concede that our own methods are, in essentials, the best; on the other hand, we are all willing to find "good in everything" that promises the realization of higher ideals in the education of the deaf. Hence it is that we, the representatives of all methods, may gather here in perfect accord and profitably discuss the different ways of teaching our deaf children to use and understand spoken language.

Mr. Chairman, notwithstanding the enforced change of its date, our Summer Meeting opens under the brightest auspices. A common purpose brings us shoulder to shoulder and heart to heart, while the hospitality so considerately extended places us most beautifully in harmony with this most beautiful environment. Gentlemen, in thanking you for your message of welcome and for the proffered right hand of fellowship, we wish to assure you that they are grateful to us not alone because of their sincerity, and grace, and graciousness, but also because they are presented by the honored representatives of a state and community which have given such ample and abiding proof of their interest in the deaf whose welfare we too have so deeply at heart.

DR. CROUTER: I now have the pleasure of introducing Dr. J. N. Tate, who will speak of the work in the Northwestern States.

RESPONSE IN BEHALF OF THE NORTHWEST.

DR. J. N. TATE, FARIBAULT, MINN.

Were it not for the fact that several young gentlemen are to succeed me and were it not that I am persuaded that their addresses will be an inspiration to us, I should move you at once that the sessions of this meeting be closed for the day. I have attended many conventions of teachers of the deaf, I have usually listened to welcoming addresses, and nothing has more inspired me than the sympathy we find we have in our work on the part of those who

are not directly connected with us. Ours, you know, is a work that cuts us off from the communities in which we live. We have little in common with the important doings of our nation. Our whole souls are wrapped up in benefiting a class of people who need and must have our services, a class of people who, but for what we give, would be largely helpless, a class of our community who, but for what we give, would perhaps never learn the great moral lessons that may result in their salvation. But such a welcome as we have received, such inspiring thoughts coming to us, make us bolder and stronger and truer men and women. I have often wondered why we were such a meritorious people. That question has been answered today. We have heard that in order to develop character we must meet and overcome obstacles. Well, if any class of men and women on earth meet and heroically overcome more obstacles than we do, I should be glad to have that class of our citizens pointed out. I believe there is truth in what I say.

As we gather in these splendid halls, as we listen to addresses of citizens of Pittsburg who admit that though the city is enveloped in a cloud, there is a silver lining to all, I would add just one other sentiment, and that is, that as every queen must have her jewel, so Pittsburg must have this magnificent institution.

Mr. President, I come to represent a large country; I represent a country which has been populated by the overflow of citizens from all sections of our country. The energy, the zeal, the pioneer spirit that has done most for the children of men in this world has been worked out in the devlopment of the northwest by the heroic spirits that have been the pioneers and the creators of that country. We in turn are populating Canada. The northwest is not to be absorbed by Canada, but the northwest is to Americanize Canada. Though young, our institutions compare favorably with those of the east. We may lack something in the matter of equipment, we may lack some of the finer things that constitute perfection, but in substance our institutions I think compare favorably with the best in this country; and this is notably true of the spirit and trend of thought in connection with our penal institutions, which I believe are abreast of the best thought in those lines, and I believe further, that we are fully abreast in the care of that class of people who are defectives; I do not refer to the deaf, but to the imbeciles, to the moral imbeciles, that large class of our people who are well painted in a brief stanza that caught my eye:

"Out of earth's elements mingled with flame,
Out of earth's compound of glory and shame;
Fashioned and shaped by no will of their own,
And hopelessly into life's history thrown,
Born by the law that compels men to be,
Born to conditions they cannot foresee,
Come the children."

In the northwest we are making heroic efforts to comfort, to keep, to instruct, to make happy all that unfortunate class of our people, and in extending our hand to the south, and to the east and to the middle west, we congratulate you and thank you for the sympathy you are all extending to us in this behalf. This is the first convention of this kind that I have had the pleasure of attending, and the pleasure I anticipate and the benefit I expect to receive from my presence at this convention are great; and I would congratulate the convention on having such stalwart men as the last speaker, Mr. Lyon, Dr. Alexander Graham Bell, and a multitude of other choice spirits as friends of this Association, and I, as a member, do reflect the sentiments of the Association when I offer to those noble men the gratitude of my heart, and assure them that their sympathy, their work, their interest in us is an inspiration to us that we need, and we hope that they will continue to bestow upon us.

DR. CROUTER: We shall now have the pleasure of listening to Mr. Frank M. Driggs, Superintendent of the School for the Deaf of Ogden, Utah.

RESPONSE IN BEHALF OF THE WEST.

FRANK M. DRIGGS, OGDEN, UTAH.

Ladies and Gentlemen:

I assure you as a representative from the great Rocky Mountain region and the far, wild, and woolly west, that we appreciate very deeply the cordial welcome that is extended to us and to the Association; and of course we accept it most gladly. We have been a long time coming; it is a long way across the plains. I think it was Horace Greeley who said to the young man, "Go west and grow up with the country." Some have gone west; some of us did not have to go, but we have been growing up out there, quite a number of us, and we have been promoting the teaching of speech to the deaf throughout the Rocky Mountain region. I speak, I think, for

nearly all of the institutions out there, as I have visited practically all of them, and while I am quite a distance from each one of them, I am quite intimate with the men who control the institutions. In one school, at any rate, we now teach eighty per cent of our children to speak, and we hope some day to teach them all. I do not know who it was, or whether any one said, that we should come east for exploration or perspiration or inspiration, but *we* have come for inspiration. We have come for new thoughts, because new thoughts or great thoughts are forces. We came, knowing that by the association, by the mingling with one another in conventions or associations or summer meetings, we would by this rubbing up against one another, get new ideas, new thoughts and inspirations. A diamond, you know, by its being rubbed, is made more brilliant. So the teacher becomes more useful as he rubs and bumps up against his fellow-teachers. We are all of us constantly, consciously and unconsciously, giving and receiving impressions. We are reflectors reflecting, we are absorbers absorbing, new thoughts and new ideas; and it is these thoughts and these ideas that make us what we are. We of the west expect when we come to the east to get new thoughts and new ideas, and carry them back there with an inspiration to instruct our children and make the world in that part, at least, better; and we hope that in our coming we may be able to give you a few inspirations. We are grateful, as I said, for this welcome, and we accept it; and to show you that we believe in reciprocity we extend a most cordial welcome to you to come west next summer and grow up with us.

DR. CROUTER: I will now introduce Mr. E. McK. Goodwin, Superintendent of the School for the Deaf at Morganton, North Carolina, to respond for the south.

RESPONSE IN BEHALF OF THE SOUTH.

E. McK. GOODWIN, MORGANTON, N. C.

If it had been permissible, when Dr. Tate suggested that the program close, I should have insisted upon putting the question immediately. When your distinguished President asked me to respond to the address of welcome, I immediately said I knew I was not equal to the occasion. I wish I could have entered into the spirit of it, as the Irishman did when asked if he could play the fiddle. He said he had never tried, but he thought he could. I had not tried and I knew I couldn't.

It is quite an honor to receive such a welcome as we have received here. Looking around us we see one of the busiest centers perhaps on the American continent (except Philadelphia), a space for fifty miles is one live, boiling furnace,—it must be, from the atmosphere, about this time. Your state and your locality is making history, however, as well as steel. This magnificent city is doubtless the reason for this splendid institution being here,—the spirit of progress and that ability to get wealth and the ability to use it, making it useful for its fellow-men, is evident. The old state is worthy of the history it has made,—the resting place of the ashes of Franklin, and among its early philanthropists, Morris, and the distinguished gentleman who left an immense fortune for the establishment of Girard College.

I come from a state that some of our friends think slept a long, long time, longer than Rip Van Winkle perhaps, before it has awakened. But it started a long time ago,—the state in which was born the first white child on the American continent, Virginia Dare,—and we claim to have been one year ahead of you in the Declaration of Independence, the Mechlenberg Declaration of Independence, more than a year ahead of the Philadelphia Declaration of Indpendence.

I find in a number of text-books, the earliest I studied, geographies, that said that North Carolina was noted for "tar, pitch, and turpentine," and that has been handed down. That is a thing of the past. You could hardly find enough turpentine now produced in North Carolina to put on a bruised finger.

I believe we were the seventh state to establish a school for the deaf. That was an institution for the education of the deaf, dumb and the blind in Raleigh. The institution which I represent now and from which I bring you greetings is the North Carolina School for the Deaf and Dumb. We opened there in 1894 with one hundred and two children and seven teachers. We have had on our roll at one time in one year 243 children with a corps of twenty teachers beside our industrial departments. I presume I shall have to confess, as a number of others of you will, that a dozen years ago there was just a little prejudice in my mind against oral teaching. Others will admit the same thing, Mr. President, of themselves. We did not try to make an oral school in a day. We have taken it steadily, and, indeed, we are not a pure oral school today, but we have increased it from time to time in that department until we teach over sixty per cent of the children by speech and speech-reading.

I expect to see the day when we have a larger percentage, and yet, under the conditions, I presume we will not see a day near by when we will not have manual classes. I know our southern schools have all made wonderful progress in a material way, as well as in the methods of teaching speech and speech-reading, from Maryland to Texas, a long way and a big territory. Our state has realized a wonderful educational awakening in the last decade, certainly in the last two decades. I think it was Governor Aycock who said he thanked God for South Carolina because it kept North Carolina from being at the foot of the list in the point of education. I am glad we have come up two or three "notches." There is a wonderful spirit of progress in educational institutions today from the public school up, and we trust that that is true of our material progress: instead of "tar, pitch, and turpentine," it has cotton mills and other manufacturing interests which will ultimately put us on our feet, so to speak, and give us means to push forward and advance educational interests as well as commercial and material progress. I wish I knew more of the actual conditions, in school work, among our southern schools. I have visited a number of them and they are doing excellent work, and I believe from year to year have increased the percentum of children taught in the oral department. I should be glad, were it not for the feeling that has been suggested that the program stop, to say some other things. I notice my friend from Kentucky is the next gentleman on the program and he will doubtless tell us of the fine horses and other good things that are found in Kentucky.

DR. CROUTER: I now have the pleasure of introducing Mr. Harris Taylor, who represents the school for the deaf at Danville, Kentucky, and who recently went from slow Philadelphia down to that rapid town, and I have no doubt he will give you a very lively account of his experiences there.

RESPONSE IN BEHALF OF THE SOUTHWEST.

HARRIS TAYLOR, DANVILLE, KY.

Mr. President, Ladies and Gentlemen, and Superintendents:

There is something, I believe, in the scripture, about holding the best until the last. I hope that will apply to me. You have heard the addresses of welcome; you have heard the responses; and now you have the opportunity of hearing me; but I shall guard against

undue eloquence out of consideration for my friend Mr. Lyon and others. I do not wish to put them at any disadvantage at all.

One of the speakers said that words failed him, and he went on to say why. If words fail me, it will be because I do not know what to say. I stand here today in two spots, Kentucky and Texas. I am a feeble representative of two strong men in two big states; I am Mr. J. W. Blattner of Texas and I am Mr. Augustus Rogers of Kentucky. I hope that neither gentleman will know that I said so.

About two months ago Dr. Crouter turned me loose on a long suffering and defenseless state, and after three days of citizenship in Kentucky, I am here to tell about the oral work in that institution. I will say in regard to the oral work of the Kentucky school that it is done there. The oral teachers themselves admit it. And a good percentage of oral work is done. The superintendent of the Kentucky school tells me that better work is going to be done in the future. By the way, I am going to Kentucky; but that is aside; we were not talking about that at the time; and I find the teachers are heartily in sympathy with the superintendent in his desire to do more and better oral work in that state. Since I have become a citizen of Kentucky—since last Tuesday afternoon—I have tasted the hospitality of the state, and the pretty girls—I mean, I have seen the pretty girls and fine horses and the magnificent farms and the comfortable old homes, and I rejoice to be a representative of that state.

Now, I will have to go over to Texas and represent that state. I will say in regard to the oral work of the Texas institution, that I helped start it; I left that institution, and the oral work has been going on, gaining rapidly ever since, under the direction of Mr. Blattner. He has done faithful work and intelligent work and is going to do better work than he is doing, and more of it; and I think that, like Kentucky and South Carolina and North Carolina and Georgia and a few other states, there is going to be a vast amount of oral work done there, and good oral work.

In reply to the addresses of welcome, the south appreciates hospitality, and we thank you for the hospitality that you have extended. Personally, I always appreciate hospitality. I appreciated a friend's hospitality once for two months, and he finally told me that he was satisfied that I appreciated it. But the hour is growing late, and I do not want any one to leave the room on my account; so I thank you for your attention.

At this point Mr. Jackson vacated the chair in favor of Dr. A. L. E. Crouter, President of the Association.

PRESIDENT CROUTER: The hour has now arrived when we must complete our organization. In accordance with the resolution of adjournment adopted by the meeting held at this place on July 3d in conformity to the call issued in the April REVIEW, the adjourned Seventh Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf is now called to order, and will be held here from this day on until Friday of next week. The regular business of the Association is now in order.

The Board of Directors at the January Meeting named as the Local Committee on Arrangements for this Summer Meeting, Mr. John B. Jackson, President of the Board of Directors, and Dr. Wm. N. Burt, Principal of the Western Pennsylvania Institution for the Deaf and Dumb. We are indebted to this committee for the delightful arrangements and privileges we are enjoying, and it will continue to perform its important duties during our sessions. At the same meeting the Committee on Program was appointed. This committee will continue in charge of the order of exercises and will make such changes in the program from day to day as may be necessary. The two following committees have also been named: On Enrollment of Members, Messrs. E. S. Thompson and E. G. Hurd; on Resolutions, Mr. Harris Taylor, Mr. E. A. Gruver, and Mr. Frank M. Driggs. Other committees that may be needed will be, under the By-Laws, appointed by the Executive Committee. Mr. L. W. Mendenhall, having been engaged by the Local Committee and President as stenographer for the Summer Meeting, will make the official notes of the proceedings.

Dr. A. C. Gaw, of Gallaudet College, Washington, was then by resolution nominated as Assistant Secretary; the resolution being duly seconded was carried.

It was announced that on account of the lateness of the hour and the heat of the afternoon the annual address of President Crouter would be delivered Monday morning at 11 o'clock.

Dr. Burt then read letters of regret from the following named persons: President E. M. Gallaudet, Dr. E. A. Fay, Dr. J. R. Dobyns, Dr. Job Williams, and Messrs. F. D. Clarke, S. T. Walker, Henry W. Rothert, J. T. Rucker, Augustus Rogers, R. S. Fraser, John F. Miller, and T. L. Moses. They were, upon resolution, presented to the Association and ordered to be filed with the Secretary, upon which the President declared the meeting adjourned until evening at 8 o'clock.

At the hour appointed the meeting assembled in the chapel.

DR. CROUTER: We have with us this evening a very distinguished lecturer and educator of the State Normal School of West Chester, Pennsylvania, a man well known in educational and in literary circles. I know he will have something of interest to say to you and I ask your close attention.

THE REAL PURPOSE OF NATURE STUDY.

DR. SAMUEL C. SCHMUCKER, STATE NORMAL SCHOOL, WEST CHESTER, PA.

The subject which I have announced for this evening I am afraid sounds rather egotistic; when I try to say, without any authority from anybody else but myself, what is the real purpose of nature study, it would seem as if I presumed to speak as a leader. May I say frankly that what seems to me the particular value of nature study is not the thing which impels the largest number of teachers to teach it; but I think, before I am through, you will realize that I have shown you how this study has evolved, and I will show you the various objects men strive to gain by nature study, and then I should like to show you what beyond these is to me the impelling motive in doing nature study work. For my life has come to be given practically to this work; my teaching in the normal school is bent to this; my public addresses everywhere are on this subject,—some nature subject always. And, friends, if it was simply because I was fond of grasshoppers and simply because I was fond of dandelions, I would be ashamed to speak as much as I do; to take as much time from people as I do, if there was not more than that back of it. So I want to speak to you, if I may, of the history of this movement and of one aim after another that men have held before them in doing this work. I think, friends, that often when we do anything, we combine whatever motives other men have had before and add to them something of our own. No subject leaps full panoplied into the arena. Everything begins with tentative efforts here and there, and new phases arise; but everything that is good in the old is held in the new. So let us see, if we may, what are the objects that men have sought to attain by doing this nature study work. For, friends, it is not a fad or fashion that runs through the schools. I do not object to a thing because it is a fad. A fad makes things very interesting while it lasts. People do not want

bonnets that are not faddish, and I do not know why you cannot have variety in your school work as well as in anything else. The old staple things are going to be done anyhow. So we do not need to be afraid of a fad; it adds interest to the work, and it keeps up the enthusiasm of the people that are doing it. So I would not worry if it were a fad. But it is more than that. It is a slow and steady growth; and although there may not be many schools in which there is a set time in the program arranged for nature study, nevertheless the spirit has gone into the primary work everywhere and is holding its own.

The first purpose for which nature study was introduced into the curriculum was to secure observation. I find that the largest number of teachers now speak of that as the one great desirable end. I find they want to teach their children to look at things, to see things around about them. This is a very valuable purpose. It is perfectly startling how we go around with our eyes closed. Things are in front of us all the time and we never see them. Let me show you how in my own case this has proved itself, to my intense disgust. Huxley taught us years ago that it is utterly profitless for anybody who wants to be a naturalist to attempt to know any wide range of animals; and therefore he has taught us to pick out types, make ourselves thoroughly familiar with one animal of a kind, and then to group a dozen or more around that one; they may vary in some respects, but the salient features are alike in them all; and so it has come that we have come to know one of each of the groups. Now, I had become familiar with all the great groups in the insect world, and was beginning to be familiar with the smaller groups, when there was one that struck my attention particularly. I had used a book published by the Professor of Entomology in Cornell University, and one of his descriptions there caught my fancy. Mrs. Comstock had made a picture, and Dr. Comstock in describing this insect which he called the Lace Bug, said, "It is clothed from head to foot in pure Brussels lace." The idea of an insect clothed from head to foot in pure Brussels lace caught my fancy, and I wanted to see that thing. I never saw it for years. But one day I walked into the library of a friend of mine and he happened to have a microscope standing on his desk. I walked up to that microscope, as I do unconsciously when I see one—I must look through it when I see it; it is just second nature (I have another temptation: and I am never happy until I have satisfied it, and that is to read the title on the back of a book. When I get into a

train and somebody in front of me has a book, I am perfectly miserable until I have read the title of the book). And so, if there is a microscope standing around, I have to look through it. I put my eye to the microscope, looking through it almost without thinking and talking to my friend meanwhile, when suddenly beneath my eye lay the lace bug. I turned to my friend and said, "Where did you get that?" He said, "Mr. P—— gave it to me." Mr. P—— is the sort of man that now and then we find—he was a clerk in a railroad office. And later I knew the head of that office. I said to him, "You have a man by the name of P—— in your office?" He said, "Yes." Said I, "Do you know that that man is the authority for fresh-water sponges in this country?" He said, "No, I did not know that he was an authority on anything except his work." Here was this man leading a double life: In the daytime a clerk for a prominent railroad and at night-time the authority for fresh-water sponges in the society of natural science. The next day I saw Mr. P—— and asked, "Where do you find the lace bug?" He said, "Most anywhere." Said I, "By preference, where?" He said, "Under the bark of trees." I said, "What trees?" As a matter of fact I thought probably he had always found it just about the same place. But he probably did not realize this until I made my question direct. "Well," he said, "by preference, the sycamore tree." I had pulled the bark off of sycamore trees again and again and again; it pulls so beautifully. In front of my grandmother's house had stood one and I had torn the bark off of that and made it into money and had played store with the money; I had pulled the bark off of sycamore trees for years and had found no lace bugs under it. I went home that night and as I got off the train I passed a row of sycamore trees. I took my knife out, took off a piece of bark, and under the first piece I lifted were thirteen lace bugs. I have gone to sycamore trees again and again since that, over and over, and I have eight times out of ten succeeded in finding lace bugs under the bark of sycamore trees. It is astonishing how absolutely we can have things before us and not see them. (Applause.)

And so it is, friends, that there came this great wave of new work; so the old object lesson was turned over into a profitable channel, and out of the old object lesson came the new nature study, and we are teaching children to see things they never saw before. And don't forget, just incidentally, that it is not a question of the eyes at all. These things are all mirrored on our retinas long before our brains take any knowledge of them. There must come a desire

in the brain and an interest there, and then you will recognize these things outside whenever you happen to come to them. It happens so often that these things are hovering so close together that any little thing brings them together with a startling coincidence. One day I was going to the top of the mountains in Sullivan County, and at the last railroad station I saw a copy of the Century, in which John Burrows had written an article on "The Art of Seeing Things." I went up to the top of the mountain, up in the old hemlock forest, the loveliest place in Pennsylvania, the old hemlock forest where trees stand since the time of Columbus, and where I know a sugar maple that is fourteen feet around four feet above the ground. I was going out through that old forest with a man quite familiar with the forest, and at the base of one of the hemlocks I found a pathway, apparently, around a hemlock, and made of small pieces of bark. I noticed these pieces of bark had been lifted off this hemlock tree high up the trunk. I knew they cut hemlock trees for bark and cut them for timber, but I could not conceive why they had taken these pieces of hemlock bark off of this tree. I said to my friend, "Can you tell me why that path of bark is laid down there?" He said, "No, I never saw anybody do that." I went home and sat down a few minutes before dinner and I picked up this article of John Burrows, and there he tells us that sometimes in our northern forests the woodpecker will pry off pieces of hemlock bark until there will result a mound of bark all around the base of the tree. Isn't it strange how this account fell on me just when I wanted it. If we will begin to open our eyes and begin to see things around about, there is an enormous interest in life. I cannot tell you how much more I enjoy a ride over the flat prairie of Indiana now that I realize that underneath the whole prairie is a surface like that of Kentucky—that there is a great valley system underneath the whole level shield of glacial drift. The consciousness of that makes a whole world of interest in that country roundabout.

Then came the great wave of scientific information—the transformation of commerce, transportation, manufacture, and every department of life. Then came all of that wonderful development; our colleges began to add scientific laboratories; our furnaces had their chemical laboratories; our soap factories had their laboratories. Everything was being scientifically done. When we came to the realization of the fact that the pupils in our schools get out of school by twelve or fourteen years of age and do not get back again—the

great mass of them are out by that time—men said, "They must have a part of this training; we must see what we can give." Then it was that Mr. Huxley wrote the introductory primer, and he got men to make primers of the sciences; but it was a miserable failure. Those things must be done not so much by scientists as by those who are familiar with teaching children. These men wrote text-books on the elements of the sciences—that is to say, of the first principles of the science; and, friends, the first principles of the science are the flower of the science, and they have no meaning for children whatever. That whole movement fell still-born. We had in this country an attempt to follow it. Hyatt tried to write a book on insects. He called the thing "Insecta," and that shows the effect of it from the first. He made a detailed attempt to describe the anatomy of one insect and then another and then another. Then that passed away. The demand had been made that our children get scientific information, and they are getting it. But every now and then one of my scientific friends will say, "Why don't you take some one thing and handle it thoroughly?" You people who handle children know how absolutely foolish it is to talk about taking some one thing and doing it thoroughly. Thoroughness has nothing to do with a child. If I were to take a grasshopper and do it thoroughly, the only possible result would be that the children would hate grasshoppers the rest of their lives. But none the less, the nature study movement has created an earnest desire to make people see things. Nature study is the study of nature. It is not the study of a book or a picture. Just the minute it is of the book or the picture, just that minute it is not nature study. It may be something just as good, but it is not nature study. Nature study must be the seeing and thinking over of the things you have looked at; perhaps the reading of the thing you have looked at; but it is of the thing you have looked at; so we are teaching our children to see things, and we are picking those things which are scientifically interesting, and valuable, too.

Then came another side of the problem. We began to understand the principle of correlation in our studies—how one branch in the course can minister to the others—and then we began a beautiful practice. For instance, my nature study lesson may be a cornstalk for one week—and one week's work is thorough enough for a child. One day it is a drawing lesson, one day language lessons, and another day something else; but here is the cornstalk, and they have come to understand what a cornstalk means. They have come to

understand why it is jointed at so many points, that the whole stem of the grass is tied up in joint after joint, and there is a growing spot at every joint, so that a thing can be growing at ten places at once instead of only at one place at the top. It is a splendid subject, so large and interesting and so beautiful, and so common; all those qualities ought to come into a good nature subject for children. And so here you have a splendid subject for a lesson on the corn. But, friends, when you are done with corn, they ought to understand a grass, because the corn, of course, is only a great big grass; and then you ought to begin to use that as your primary idea for clothing with meaning the plains of the world. You want, from the corn, to go out and clothe the world with grass. As you get your children further up in the grade, get them to understand that the Creator did not put down forests and plains in the fashion in which a woman makes a bonnet—that the conditions are such that grass must grow there, and there must be forest here; and we can know why it is forest. There is no marvel about this thing; it is plain.

The child who has had a good lesson on the cat, has learned to know the habits of the cat, not only that the cat is soft, but has learned to see the teeth and claws of that cat, the way it uses its claws, the whiskers of the cat and how it uses them, and has learned to notice the cat's quiet habit of getting along, the intense dislike the cat has of being disturbed, the self-sufficiency of the cat,—just the utter antipodes of the dog (the dog is as sociable as he can be). Afterwhile, she begins to understand this self-sufficient creature that hunts by herself,—that does not call the pack and chase, but quietly leaps upon her prey; and when you once have a good cat, then you can put that cat out on the sands and make it tawny and big, and you have the lion exactly, and there is no difference at all that the child cannot understand, only it is big, and tawny to fit the sand.

(Here the speaker described the tiger and leopard and their haunts, as illustrations of the cat family.)

You have the same cat, and the child can make that cat live anywhere in the world; and the child will have a new and clear and sharp conception; because those are not simply members of the cat family; they are cats; they are cats in all their behavior. This thing was wonderfully borne in on me one day when I had the pleasure of romping with a young tiger; it was about two feet long and fifteen inches high, and at first I was afraid of it; I thought it would claw me and bite me; and this great big clumsy thing would go around pawing after a handkerchief. We had a terrier dog in the

party, and every time he barked, the tiger would tremble and quiver all over. She had not the faintest idea of her power. She was absolutely nothing but a kitten in everything but size and color.

So it is that we pass to that next stage in which the primary ideas shall be gotten by nature study, which shall be the starting part for excursions all over the world, and which may enrich all the later work of the school. And all these purposes are good. Every one of them is good. Every one of these is very desirable: and yet, if there had not been more than this, I think I would have been quite content to let somebody else do it. I would have done more or less of it every now and then, but I think I would have chiefly found my nature study pleasant to myself. To me, it is the recreation as well as the work of my life. I think that is the reason I can keep at it unendingly; it is the deepest enjoyment of my life. I cannot give my vacations to anything else but gathering material for my work. I would have been content to have kept it for my own enjoyment. I probably would have made an investigator or scientist of myself if it were not for several experiences. You will pardon me if I go into the development of this matter in my own life,—because it will help you to understand why I have become so intensely and enthusiastically earnest in the matter of this nature study. I suppose it was seven or eight years ago that the movement began to so clearly lay hold of me. At that time the college settlement down about Bainbridge and South streets in Philadelphia was young. That neighborhood was unspeakably tough. It was where the Russian Jew and the negro came into conflict with each other; and right on the border line of those two groups of people, a little group of earnest God-fearing women had established themselves. Now and then some school man will tell us of the horrible power of the contagion of evil,—of how a bad boy can spoil a school. Friends, you need not speak to me any more about the contagion of evil. The contagion of good is infinitely stronger, I believe, than the contagion of evil. Just try to imagine the effect of planting a disreputable establishment in the heart of the good part of a city. It would have no effect at all. For a little while the people would stand it, and then they would have it out; that's all. But plant a clean little home of people who just lead earnest, faithful, clean lives, simply and humbly there, and it will clean up the neighborhood. Those of you who know Philadelphia, know what happened down there—you know how the place was cleaned up, how the open park came there, and what a place it came to be. Now, it is very

respectable to go down to that neighborhood, but it was not in those days. And you didn't like the looks of it after night, even if you were a man. The leader of the settlement asked me if I would not come and talk to her boys and girls one Sunday night. That is the only night they can get them together very well. So one Sunday night I came down and brought with me some stuffed birds, and I took birds particularly that they would see in the parks close at hand. I tried to tell them about the birds and interest them. I do not hesitate to say that I succeeded with those children; after it was over they gathered around me: "Let us see what you have; let us feel it, stroke it," and everything else; they just crowded around, and they were my friends. There is no question about it, it was a success; and the leader said to me, "Won't you come again next fall?" I said, "Indeed I will," for it had interested me immensely. I went back again the next fall and took some cocoons and butterflies with me, and the first thing when I came they flocked around and asked me what I was going to talk about, and I had to get them back into their seats. Again everything went well—everything went my way. When it was over they were better friends than before, and again the leader said to me, "Won't you come down again next fall?" And I said, "Of course I will." And the next fall I came. Now, every one of us that cares intensely about anything, and cares to tell about it, has one little story in which he will tell himself out a little more plainly and heartily than in any other story; and if I wanted to talk to a little group of sympathizing friends—friends that knew me and cared for me—I would tell them the story of the dandelions. Of course I could not take dandelions down there; the meeting was at night, and the dandelion has sense enough to go to bed at night. But my wife made me some exquisite water-color charts, very handsome things, and I took my charts and I went down there to that settlement. I began to talk to these children about the dandelion, and the whole meeting froze over. They got colder and colder and colder, and in a short time it was only the fact that they were friends of mine before that kept them quiet. It failed absolutely and utterly, and I had hoped to touch them as I had never touched them before. I failed utterly and absolutely. When it was over I turned to the kindergarten teacher and said to her, "Won't you tell me, please, what was the matter with that speech?" "Oh," she said, "that was all right." I said, "Stop!" I said, "Stop! you know it wasn't. Please tell me what was the matter with that talk?" "Well," she said, "I can tell

you; they didn't know what you were talking about." Said I, "What do you mean?" She said, "More than half the children in this room have never seen a dandelion." Said I, "What do you mean?" She said, "I mean just what I say." I said, "Don't you have an alley anywhere?" She said, "There is not an alley in the ward that is not asphalted from curb to curb." I said, "How about the ash heaps?" She said, "Why, they daren't throw a thing outside of the back door."

I do not mean that dandelions are essential to salvation at all. But here are these children without one patch of grass that they can roll on and run on. Independence Square and Washington Square? Oh, no. Dandelions they know nothing about. They know tulips. But they are as far off as the ornaments on City Hall. Of the dandelion that they can pluck and grass that they can roll on, they know absolutely nothing whatever.

This was one of the first things that set me earnestly thinking of the work I was doing. That failure was so utter that the leader never asked me back. That set me thinking on the absolute poverty in the lives of those children. But that does not reach many places. If that was what I was after, I could confine myself to Philadelphia and Pittsburg, and a few places like that; but that is not all—that is not all. Positively it is startling how little people appreciate things outside. The next year I was going out to do some work with teachers in Southern Ohio. I went to see if I could get a railroad rate that was less than the mileage, so I went to the Pennsylvania Railroad Station and got their summer excursion book. I found no ticket in it that I wanted—nothing that would help me; they do not give excursion rates to points that people need to go to; they only give them to points that they want people to go to. So I got nothing. But I looked over that book full of intensely interesting descriptions of places that they want to tempt you to; and the thing that startled me was the fact that the one picture in that book on which they had put most expense—the one picture that had cost most to photograph in the first place, and reproduce in the second, and consequently, I suppose, the thing which they thought was most attractive to the largest number of people—was a picture of Atlantic City. And what was the picture? The one thing which it was hoped would draw people to Atlantic City was not that one overwhelmingly magnificent thing, grander than all things else in nature—it was not the ocean; there was a little ocean in the corner of the picture; they could not get it otherwise; but they had taken a

photograph of about 30,000 people jammed together between a steel esplanade and two piers, with a hurdy-gurdy and the flip-flop on them. And that was the thing that was to attract a great mass of the best people in all our United States to Atlantic City—because it is the best people in the middle states that go to Atlantic City; I do not mean the richest, I do not mean the most cultured people, but I mean the great mass of our citizenship; those people who, from the toil of the year, have come to such proficiency in their work that they may leave their work for a few weeks and spend a little money for that time in giving themselves recreation. When they want to get themselves in better shape for their work, they know no more the things that make for their peace than to crowd together by the thousand in one little area like that, instead of spreading themselves out and getting the ocean and the air and the open sky. Our people crowd there by the thousands and tens of thousands, and do not know what it is they go for.

And then again—and this inspired me most of all—every now and then somebody would come to me and say, "I was raised on the farm. I wish to goodness somebody had taught me to see these things." And I could not realize that a boy that grew up on the farm did not know the birds on the farm, and did not know the trees on the farm, and did not know the weeds on the farm. It did not seem to me possible that anybody could grow up and not know them, and not know the snakes on the farm, and a host of other things so common that it seemed to me a boy could not live amongst them without knowing them. I thought these people were perhaps strange or peculiar, or perhaps had been worked too hard. And then one day a young friend whose acquaintance I had made when I was camping in the mountains, wrote to me and asked me if I would not come and lecture in his school at a little mountain cross-roads on a Saturday night. He gathered together his directors and friends and pupils, and in this mountain school-house I tried to tell them a little nature story about their dragon flies and toads and snakes and things round about. The next day was Sunday, and this was on a branch road; there was no train on Sunday. I said to the boy with whom I was stopping, "Have you ever been up on top of the pinnacle?" The pinnacle was about two miles away. I said to him, "Have you ever been on the top of it?" From the top of that mountain you could see the great long stretch of the Blue Mountains. You could see just about where the Schuylkill River broke through; you could see the Lehigh Gap; and on in the distance the Dela-

ware Gap. Across the great Appalachian Valley in front of us you could see for a stretch of forty or fifty miles. It was a perfectly magnificent view, and I said to this boy, "Have you been on top of the pinnacle?" And he said, "Yes, twice; we have had picnics up there;" and I, who lived one hundred and fifty miles from it had been on top of it at least fifty times. I said, "Let us go up tomorrow." He agreed; and on the following day I fastened to my belt a kodak and an aneroid barometer, and took a note book, and I set that boy watching the strata, noting where the structure changed. We studied that hill as we went up, not very deeply and not very scientifically, but enough to give a new view to the boy. A few weeks afterwards he sent me a copy of the county paper in which he had written an account of his trip up the mountain, and it had certainly an entirely new view of what a mountain might mean. Here was a boy with a normal school training and a school teacher, twenty-four or twenty-five years old. The next morning I started away early for the railroad station, and he went with me. It was just a little platform by a one-track railroad up in the mountains. In front of us stretched for miles the beautiful Blue Mountains; back of me was one of the spurs, and over the top of that spur the sun was rising that morning, and was throwing just on the top of that splendid range of mountains a beautiful line of pink. That line of pink, with the gray purple of the mountains and the shadow and the mist of the valley between it and us, made one of the most exquisite pictures I had ever seen. Some of you certainly know the magnificent pictures that Corot has given us. You remember how it was. He had gone to Italy to paint. His people could hardly afford to send him, but he learned the conventional painting. Then the money gave out, and he came home; and there, in his little country village by a little mill pond with a few willows, that man, in the paucity of the landscape, learned to paint common scenes at great moments; he learned to go out in the air in the morning when the strange, weird light was on these things, and made them dim and misty and romantic. And he painted pictures that men have looked at and have tried to imitate ever since; and no one ever has done it. He is the artist that gave to the painter a perfectly new idea of what effects may be had by atmosphere. And just such an effect as Corot could paint spread all over that landscape that morning. I never shall forget the magnificent beauty of that mountain landscape. Here was the boy beside me. I laid my hand on his shoulder and tried to make him see the beauty of the landscape. I felt

as if I had been lifted up into heaven and given a sight that only comes to eyes now and then. I tried to make that boy by my side see the wonderful view in front of him, but I couldn't get him to look at it. He had been in the station a few minutes before, and one of the boys in the station had played an April fool trick on the other, and this boy was so anxious to tell me that April fool trick that I couldn't get him to look at this magnificent view. There he was, absolutely without any thought of any meaning in the whole exquisite prospect.

Then I began to realize how people can live in the midst of it all and not see it. And after a while came the other side of that picture. After a while I got to going to one of the places, of all places that I have been that I have enjoyed most, away down where Grand street and East Broadway run together in New York. There I had a series of talks to the young Hebrews of the Benevolent Association. When I got off at the elevated station I would see into one of those men's hotels. There I saw the men sitting that ought to have been back in the country—the men that had drifted in from the country, drifted in to the great city. Friends, there is a wonderful opportunity in a great city for a man; there are chances to make something of himself that he will never get anywhere else; but there is only one in a hundred thousand that can make it; hosts and hosts of the rest of them are ground into nothing, and there they lie, going through a dull routine of work, and their lives absolutely worthless. Such lives as they live! Simply horrible! I do not mean in bestiality; I do not mean in immorality; I mean in utter nothingness; meanwhile the country is longing for them and needing them everywhere. If they had known their country before they left it, they never would lie around New York. Never! But it is an awful story. Our best blood is being drained into the city, and ground down when it gets there. I live in one of the old parts of the country, and I see the story working out there. It is pitiful. We have a country paper there that still prints the letters from its correspondents. And one of the old Quakers wrote to our little paper there some time ago, and he said, "I am living on the farm. It has been in the hands of my ancestors since the Penns. I have thriven on the farm, and I have added to it two other farms about as big as it. I have three beautiful farms in this beautiful county of ours, and I have three sons, and I cannot get one of them to take one of the farms for a gift." Friends, do you realize what that means? Think of a farm that has been in the family, as I know, since the

Penns, the date stone still standing in one part of the house. Near by is a house built of bricks brought from England—because there were none made here yet; and that farm is now divided into three parts, one managed by a negro, one changing tenants all the time, and only the third, managed by the people to whom it belongs, and from whom it will probably soon pass. Now, friends, that is a horrible state of affairs. It seems to me that is pitiful for Pennsylvania. What is to become of us if we go drifting into the city like that, and then grinding down when we get there?

And so you begin to see the nature-study problem as it looms up in my mind. We have in this state of ours—and what is true of us is true in other states, some of them perhaps not so crowded—but we have in this state two sets of people for whom my heart is so anxious. One of them is that splendid set of people, the farming community, with its splendid backbone. If only the country boy can be taught to love that home place; if every nook and corner of that farm shall have been a place of delight in his boyhood; if, when the time comes that he can get his little vacation, he will come back to rest there; if somehow or other he may get the idea that when his later life comes he must own the old place again; if we can tie him down in some way to care for the ground on which he lived, then we will have safety again for those places instead of letting our country get into the hands of people that have no interest in it, and who have no intention of holding it for any time whatsoever.

And then there is the other set—Wilkesbarre, Johnstown, Homestead, McKeesport, Pittsburg—the great manufacturing centers and the great mining centers, where children by the hundreds of thousands can only by a process of law be kept in school as long as the law absolutely demands that they shall be kept, and then they must get out and get to work. Will you stop to realize what your life would be without literature, without music and without art—will you stop to realize what your life would be if it were all given to work, to maintaining yourself; if it were just one continuous struggle to keep alive; if you were confined to doing something for which you had no fondness, but which simply put bread into your mouth and clothing upon your back. That is the occupation of more than one-half of all the population of Pennsylvania. What can we do for those people? Literature will not mean much, because literature means leisure. If you teach them to read, that is as much as you can do before they get out of school. As for music, they know only the most elementary forms. Their life cannot be made sweet by

literature, or music, or art. What can we do? In other words, what shall serve for culture in those people? Or must they forever be without culture? I say this. Amongst the most inherently cultered people I know, amongst the people that have the sweetest spirit, the sweetest gentleness, the sweetest peace that comes from contentment of mind, two people stand out preëminently. One of them is John Burroughs; the other one you would not know if I named him. He is a man who has grown up near my own town. These two men acquired almost all of their culture from contact simply with nature—faithful, earnest, loving contact with nature.

Friends, the dream in my heart is that somehow or other our children shall so come to love the ground upon which they live that they will be entirely familiar with every roadside plant, and every tree they pass by; will know the birds so well that a walk from work is a walk that strengthens and enlivens a life that would otherwise be ground down. Somehow or other it is my hope and dream that nature shall serve for culture in those people for whom culture in the ordinary sense of the word is impossible. It is that hope that has driven me, more than anything else, to do the amount of nature work I have done in my life.

And now, of recent years there have crept in, within the last two or three years more insistently, a new hope and a new desire. I cannot say what may be the causes for this condition. Men who are right in the midst of the difficulty do not know what the causes are. Some of them think they do; but two men equally favorably placed, if asked to tell you why, will give you entirely different reasons. But for some reason or other the fact is plain that the hold of revealed religion, or at least of the churches, upon the people is growing less. There is no question about it that a smaller number of our people go to church, and a smaller number of people listen to the pastor with any sense of authority upon the part of the pastor. Under the circumstances, does that mean that religion is loosening its hold on life? I am not sure that it does. I have many reasons which make me feel that, after all, there is a more really genuinely religious feeling over the country than people ordinarily suppose. I cannot believe that otherwise there should have been such a tremendous and immediate response to the needs of San Francisco. If that was not Christianity in its best form, I do not know it. But somehow or other, men's attitude towards the Bible is changing, and in the present attitude of a great majority of men there is a feeling of uncertainty. I do not believe they are going to lose hold of the

Book; I think we are going to come back to it with a stronger and more vigorous grip than we had before; but meanwhile, that nothing will so help us in this transition period as this feeling that is growing so convincing to modern science—that there is a power throughout the whole of the universe everywhere that any one who wills can see at work. Materialism is gone. The materialism of the last century is over, and all the great scientists are asking for and pointing to a great indwelling power. We see it everywhere through nature, all the time; and I believe that power to lift us up, that power to see God not one day in the week and not in the heavens only, but here, all the time, about us everywhere, is one of the richest results of an intimacy with nature.

And now comes your own special problem. I have not met it, because I have not come into sufficient contact with it. You will have to tell how to meet that problem. You will have to apply what I have said, if there is anything in it for you, to your special problem. But it does seem to me that where children are to grow up bereft of one sense, that somehow or other every possible means which could minister to the growth of mind through another sense ought to be most intensely welcome. We are coming to realize that clear perceptions mean clear thinking, and clear thinking means prompt action; that the whole mind is a unit, and you cannot improve one part of it without improving it all. I believe those who have the great need that you have in your work for the special training of a sense, have in nature study a specially valuable means for reaching your great end. I can only throw that out as a suggestion. But do not forget that there is no such thing as a faculty—this faculty and that faculty and the other faculty—in the mind. The mind is all a unit, and you cannot teach a child to see better without teaching it to tell better, and tell more truly, and tell more accurately, and to care more for the truth. Of that I shall have more to say tomorrow. But meanwhile, won't you get everybody that you can come into contact with to have such familiarity with outdoor life as will tie them to the home in which they live, as will make them care for the country in which they live and will give them something, especially if they are poor, which will lift their lives above the mere dull grind of life.

On Sunday afternoon, at 3 o'clock, the meeting assembled in the chapel, and the following papers and address were given:

SUNDAY OCCUPATIONS FOR YOUNGER PUPILS.

BESSIE N. LEONARD, CLARKE SCHOOL, NORTHAMPTON, MASS.

Emerson says that the "healthy growth of the mind is just in proportion to the activity of thoughts on the study of outward objects;" and a recent writer on hand work tells us that "modern science says the same thing when it teaches that the human brain is by no means developed by the study of books alone, but very largely by the use of the hand. History also shows how tools and weapons have been the means of immense mental growth in the human race before the invention of printing. The scholarly Romans were conquered by our illiterate ancestors, the Goths and Saxons, who proved themselves to be statesmen as well as warriors. It is certainly safe to say that there have been centuries of brain development, comparatively few of which have been influenced by books."

If this be true, educators may well consider not alone the so-called intellectual studies, but devote more and more earnest efforts to developing the mind through the training of the hand.

In this paper, presented by request, it is designed to briefly outline various sorts of hand work which may be used on Sunday with the youngest pupils in our schools for the deaf.

To make Sunday a day unlike the other days of the week and one to be anticipated with pleasure is one of the legitimate ends to be sought. The work which is done on this day, aside from that of the Bible lessons, seems the direct outgrowth of a definite need. This need is being met by the systematic arrangement and use of such Kindergarten occupations as seem most valuable in the training of the eye and hand.

Of the most important feature of the Sunday work, the Bible lessons and nature work, we shall not speak, since it is the purpose of this paper to outline occupations only.

The particular work described is that which is done in the Primary Department of the Clarke School. The children, excepting the youngest, attend church in the morning on Sunday and in the afternoon all spend two hours in the school-rooms.

This afternoon time is divided into four half-hour periods; all of these are given to occupation work with the youngest children, while with the older the first two periods are devoted to Bible lessons and nature work followed by the occupations during the last two periods.

The direct gain to the child is not the only helpful result following the use of such materials as we have chosen to keep apart for the one day in seven. Since, surely it is true, that every sort of hand work reveals something of the mental and moral condition of the individual; the teacher is enabled to form the more rapid and more accurate judgment of the mental capacity of the children if there is great variety in the material used, thus affording wide range of observation.

The cultivation of the powers of observation, imitation, and of originality is one of the objects to be kept constantly in mind in planning this work. All this leads to moral and physical control, the value of which cannot be overestimated. There will be fewer mistakes in all our work when insight takes the place of instinct; the latter, if followed, will not often lead astray, but the former will more surely lead aright.

The materials used during these hours on Sunday are those which have been reserved for that time almost exclusively. The younger the children the more time given to sense training and Kindergarten occupations in regular school hours, and so a greater variety is introduced than with those who are older at the time of entering. If desired, some of the exercises which the younger children use daily may with profit and enjoyment be used by the older ones on Sunday.

On the first Sundays of the year we use with the children who are with us for the first time the very simplest forms of occupations, such as the stringing of the wooden beads, which are to be obtained in the primary colors and in three forms—sphere, cube, and cylinder. The beads first strung are of one form, but of two alternating colors; other colors and forms are combined as rapidly as the children are able to use them. Later, the single string is replaced by the combination of two.

The peg tiles, familiar to all Kindergarten teachers, give another opportunity for work in form and color. Exercises with these may be greatly varied from the simple sorting of the different colored pegs, their arrangement in designs following those made on the teacher's tile, to the working out of the same from patterns drawn with colored crayons on wall slate or chart. Additional pleasure is given when on each of the pegs arranged in the tile one of the wooden beads, previously mentioned, is placed.

Brief rest exercises of a gymnastic nature are introduced at intervals and between different periods of work.

The collecting, sorting, and arranging of leaves, shells, nuts, cones, and seeds affords unfailing pleasure. The stringing of straws and parquetry and the making of paper chains are among the simplest occupations.

The more direct study of form may be well accomplished through the outlining of familiar objects with lentils, common wooden shoe pegs, and the mass work, so-called, with rice.

Too much emphasis can hardly be placed upon the benefits to be derived from the systematic use of clay. One of its strong advocates says: "I go so far as to believe that our race owes more of its education to the use of clay than to any other one thing. The first efforts of men to make anything were in the soft clay or mud with which they fastened utensils, built their huts, and made rude images for worship. . . . When it was found that fire made it imperishable, a great discovery in the world's industrial and educational progress was made. Then the enduring character of the utensil called for more careful workmanship, and lines were drawn on it to beautify it, to tell a story, or in some way to record the thought of the maker. . . . Ages later, when civilization was at its highest, clay was still the best medium of expression, and the glory of Greek sculpture was due to the possibilities of clay. . . . The surpassing advantage of clay over other mediums for manual and artistic training is perhaps the possibility of its employment at a very early age. I know no work in which children of all ages will be interested so long, nothing which better cultivates observation and taste, nothing which better teaches at once persistency, carefulness, industry, neatness, and truthfulness."

Our common fruits and vegetables furnish a variety of models for this work, and many of the children's toys may also be used for this purpose.

Paper cutting as an occupation for our children is one of almost inexhaustible resource. For this we need small blunt-pointed scissors which work easily, and paper of medium weight, as the manilla drawing paper. Much of the pleasure of such an occupation as this depends upon the ease with which instruments and materials can be manipulated. The children are quite content to begin following with the scissors the lines, straight, angled, and curved which have been prepared for them; time may be saved by hectographing numbers of sheets of such work. Simple outlines of familiar objects may soon be used, as those of fruits, vegetables, simple leaves, and common toys. If, by chance, any of these recall to the child words already

learned in speech and speech reading they will prove of peculiar interest. In order to give added zest to this work, the figures may be colored before being cut out. When the eyes have become sufficiently observant of form and the hands sufficiently accustomed to the use of the scissors, free-hand cutting, that is, cutting from the plain paper without the aid of any outlines whatever, may be attempted.

Choose as a model some familiar object of simple outline. The same objects suggested for outline cutting being good for this purpose also. Help the children to carefully observe the model before attempting to cut its form in the paper. Then let them observe the teacher as she slowly brings out from the blank paper the form of the chosen model. If the children feel that they are being asked to attempt the impossible, the approximate success of a few of their number encourages the others to try again and enthusiasm is quickly aroused. It also helps them to know that their best efforts are considered worthy of preservation. This work, if mounted on attractive background and made into books, may be taken home. Early knowledge of this possibility adds to the interest of this and other sorts of work. (Books shown.)

The small colored papers, square, circular, and triangular in shape, known in the Kindergarten as parquetry, can be obtained in all colors with their shades and tints. These may be used in the making of designs which are first arranged on cards and then pasted as arranged. Cardboard ruled in one inch squares may be used for this purpose, the cards being cut of any desired size. After the children have followed given patterns for a time and have formed ideas of arrangement and of combinations of color, they enjoy being allowed to choose their own colors and to make original designs. (Book shown.)

The Kindergarten also gives us another valuable material in the so-called cutting papers. These pieces of paper, four or five inches square, are first folded according to a given plan and are then cut on lines drawn upon the folded paper. The several pieces resulting are symmetrically arranged and pasted on mounting sheets. A series of attractive designs, including a great variety in form and arrangement, may thus be produced. (Book shown.)

Our children have taken pleasure in one of the more recent sorts of occupation called "winding." The foundation is of cardboard—a medium size card of any shape may be used. In each edge of this one or more slits a half inch in length is cut; heavy silk is

wound around the card and slipped into the slits so as to produce a given figure. (Book shown.)

Paper folding gives excellent opportunity for training in exactness, and like most of the occupations furnishes ample proof of its practicability. (Book shown.)

Drawing, important, considered by itself, doubles in value when correlated with other sorts of form study. Placing a bird or other object as a model before the children, its form can be reproduced in the mass work in rice, modeled in clay, cut in free-hand cutting, and, lastly, drawn on the slate, or with black or colored crayons on paper. Leaf forms may be reproduced in all the foregoing ways, substituting for the modeling the impression of the leaf on a clay title which the child has made. Certain models may be used on successive Sundays. Plants in their various stages of development prove subjects of interest. A spray from an evergreen tree drawn at one time with colored crayons, showing its brown stem and green leaves, at another is represented as seen from the window after a light fall of snow. A background of colored cardboard makes it possible to bring out by the use of white crayon the effect of the fallen snow.

In all the sorts of the form study which have been mentioned, it may have been noted that whenever possible the subjects chosen are from the world of nature with which the child is more or less familiar and of which we wish to make him more observant. Whatever nature has to show us let us observe. Stop any work at any moment in order to show the children the rainbow colors in the sky, the falling snow crystals, or any unusual cloud or sunset. Do we not all believe with Ruskin that a perception of and love for the beautiful in nature leads directly into a discernment of the beautiful in the moral world?

There are new and valuable sorts of work yet to be devised, but some of the old work only needs to be done in a new way in order to make evident its real value.

And so may we not be sure that if the "science of educating is the science of interesting," our Sunday occupations may be made to hold a larger place than has as yet been considered possible?

Book References, Etc.—Clay Modeling; Anna M. Holland. Illustrative Hand-Book of Drawing; George E. Little; American Book Co. Story telling with the Scissors; M. Helen Beckwith; Milton Bradley Co. Raphia and Cardboard Construction; Milton Brad-

ley Co. Art Sketching Papers (for mounting work etc); Henry Lindenmeyr & Sons, 20 Beekman St., New York city. Eagle Pencil Co., New York city; Crayons; Carpenter's pencils, etc. To make paste which will keep indefinitely, add a tablespoonful of *formaline* to a quart of common flour paste.

SUNDAY SCHOOL WORK FOR INTERMEDIATE GRADES.

EDWIN G. HURD, INSTITUTE FOR THE DEAF, PROVIDENCE, R. I.

In the subject of moral and religious instruction, we have one as great as any touching the welfare of the deaf. Let us at the outset note a distinction between *religious teaching* and moral training.

By religious teaching we refer to instruction in the Christian religion, which includes all that is taught by revelation through the Bible and the manner of living necessary to conform to those teachings. By moral training we refer to the influences thrown around the deaf for the purpose of securing good moral character.

The times *especially* set apart for religious instruction are the regular chapel services and the Sunday lesson in the class-room. It is not my purpose at this time to dwell at length upon the question of methods, but let me remark that a systematic course in Bible instruction is quite as necessary as in any other branch of study. In the study of the common school branches, history, English, the sciences, a great amount of time and thought have been given in systematizing and perfecting the methods employed. The study of the Bible should call for an equal amount of attention. One of the most important features of this study is to early train pupils in the use of the Bible text, training them to "search the scriptures," to go to the source from which we get our inspiration.

To accomplish this, much of the time in the Sunday school should be spent by the pupils in looking up passages in the Bible, in reading aloud portions of the scriptures, and in so familiarizing themselves with the Bible that they can readily find any place in it when given the name of the book, chapter, and verse. This habit of study becomes valuable not only because of what the pupil learns for the time being, but by it he becomes accustomed to the frequent use of the Bible, a habit not too firmly fixed with the majority of people. During the Sunday School hour the teacher thus becomes the guide pointing out the way, and the child's mind is actively employed in

doing something for himself and not in receiving instruction merely. Thus the pupil puts more thought upon the lesson than if the teacher occupied the time in talking about it.

The pupils in the intermediate grades are able, when brought up in this way, to give a very good explanation of the lesson and show much originality of thought. I have practiced this method of dealing with the Sunday lesson for several years with gratifying results.

I often call upon one or two in the class to tell me about the lesson or to describe this or that event or tell about some prominent character mentioned. Knowing that this will be expected of them, they form the habit of studying with this in view. One surprise to me has been to find how soon and how skillfully pupils learn to grasp the central thought in a paragraph, to connect it with others, and present a brief original outline of the lesson.

Lesson helps and the quarterlies are of use as *aids*, but should not be depended upon entirely. I have used the Primary, Intermediate, and Advanced Quarterlies, but I have found that they often deal with the lesson too much in detail to be of much service at this period. There are so many questions upon the lesson and the subject is padded to such an extent with so-called "helps," that the central teaching is obscured and the story of the lesson is thus made too bulky for practical use.

A minute study of the whole Bible is impossible in the short time at our disposal in the Sunday school; the field is too wide, comprising as it does history, literature, poetry, and biography. Therefore, it is the more expedient that we should train our pupils to become *students* of the Bible themselves.

With the lower grades of Intermediate classes the time might well be spent upon those portions of Bible history and Bible narrative that have been the theme for child study from time immemorial. I refer to the stories in the Old Testament, as well as the account of the birth and life of Christ. I would give these stories orally, letting the pupils also have some good text book or Bible story book for reading or reference. During these intermediate years we should gradually begin a closer study of the Bible.

In the historical events narrated, there is much that may be selected that will be of interest. In biography, teach them the names of the leading characters, where and when they lived, and what they did, and as literature, selections may be made from Psalms and Proverbs in the Old Testament, while in the New Testament, we have such masterpieces as the sermon on the mount and the parables.

Let us here make a distinction between Sunday School work and the Chapel Service. The work of each is distinctive. In the Chapel Service the idea of worship should be always kept to the front, while in the Sunday school, study and instruction should be the aim.

Now in regard to moral training. The moral life of the individual is so intervoven with all the affairs of life that the proper development of the moral nature is an inseparable part of every instructor's work, and high moral standards *must* be established in the school if we would secure in after life a high moral tone in the pupils under our charge.

While it is true that on leaving school pupils will find that many employers and leaders, for selfish reasons, override the question of strict honesty in their dealings and throw down the standards of truth and righteousness that have been so carefully reared by teachers, it yet remains true that good moral character is the most valuable possession a man or woman can have.

The employer though dishonest himself is intolerant of that failing in those he employs, and will pay any price to secure those in his employ whose lives are characterized by a high moral tone. The position of the deaf in the world, as of the majority of the hearing, is one of service in some form for others, and it becomes the duty of all instructors to give them that moral training without which success even from a worldly point of view becomes well nigh impossible.

It is not too much to say that moral training is secured almost entirely by two great influences, precept and example. Of these two, example or personal influence is by far the stronger, we might say it is the whole thing in the question of moral living.

The deaf child in particular forms his code of living unconsciously from what he sees and from what he experiences in daily living in contact with others. Influence is the most powerful means for moral training in the hands of every teacher. We must consider both the teacher's influence and the child's environment, and so place the child that, while in school, he will live as nearly as possible the life we would wish him to live. We cannot secure high moral living by explaining to the child the difference between right and wrong. We cannot secure righteousness by preaching righteousness. What child does not very soon learn the difference between right and wrong? Wrong doing does not come so often from ignorance of what is right as from a yielding to temptation or from willfulness. I would not depreciate the value or importance of preaching to the deaf. It is of value and rightfully has its place in the school, but I

do say that the moral and religious training of the child does not depend upon it in any great measure.

The sermon is an influence, but it is only *one*. The chapel is the church of the deaf child. There he goes, or should go, to *worship* more than for any other purpose. Should our pupils attend chapel to see another preach and worship? Let all take part, and let the one who lectures be but the leader in the service.

If possible, I would have a division of pupils according to grade: three divisions if possible, the Primary, Intermediate, and Advanced, as in this way we can adapt the service more nearly to the understanding of the several grades.

The question of the proper observance of the Sabbath necessarily comes in for its due share of consideration in discussing this subject. The Sabbath should be observed, I think, in general as a day of rest,—not in the sense of a day of idleness, but that kind of rest that comes from a change in the mental and physical activities which have characterized the week days. The sin of idleness should not occur on the Sabbath. But with work and play both banished, we are confronted with a very difficult proposition in trying to care for the children properly. Outdoor or indoor exercise for all is just as necessary on the Sabbath as on any other day. And I do not consider quiet, healthful games for the younger ones at all out of place. A rigid observance of the literal rule of no work and no play on the Sabbath seems to me inconsistent with the requirements of growing children, both physically and morally.

SUNDAY SCHOOL WORK FOR ADVANCED GRADES.

JAMES A. WEAVER, SCHOOL FOR THE DEAF, MT. AIRY, PHILADELPHIA.

Every religious denomination recognizes the importance of maintaining an efficient Sunday school. No better evidence can be had of the vitality of a church than the existence of a progressive Sunday school. It is the nursery ground from which the supplies for the future are to be drawn, the place where the good seed is to be sown, and where the young and tender plants are to be carefully reared and trained. Though occupying but a secondary place in comparison with the influences of parents and home, the Sunday school provides a connecting link between the home and the church, and between the spiritual life of the child and that of the youth.

What is true as regards the value of the Sunday school in the hearing and speaking world, is equally true concerning the deaf. The Sunday school teaching is just as essential a part of their education as any that they receive in the day school. We will go further than this and say that the Sunday school for the deaf is, if anything, of far greater importance to them than it is to the hearing. The need for religious and moral training is far greater with the deaf than with the hearing. The deaf child is heavily handicapped from the very first. The hearing child comes to school already equipped with a certain amount of moral and mental education, but the deaf child rarely possesses either. Parental influence, so efficacious in the moral and religious training of the hearing child, is, in many instances, wanting where the deaf are concerned. The parents of deaf children do not, as a rule, understand them sufficiently well to influence them to any great extent. The school, then, has to do much of the parental work, and to it falls the twofold task of providing the moral and religious training, in addition to that of the intellectual. As regards the former, apart from certain influences, such as heredity and previous environment, our deaf boys and girls may be compared to clay in the hands of the potter; teachers, and others who have charge of them, may mold their characters into whatsoever form they will. In regard to the latter,—the intellectual training,—they may be likened to delicate pieces of machinery, requiring proper adjustment, and which only need to fall into the unskilled hands of the raw apprentice to be irretrievably ruined. It is this twofold part which the teacher of the deaf has to play, that gives him such tremendous influence for good or ill, and it is a task that is well calculated to make the most confident hesitate before undertaking it. There is an old saying that those who set about any great enterprise would do well to count the cost, but whether this is sound advice to be followed in all undertakings, may well be doubted. Some of the greatest enterprises have been carried out successfully, simply because their originators did not count the cost. But there is one necessary condition in all enterprises, and this is to have a clear and definite idea of the work that lies in front of us before we begin, to keep that idea constantly before our minds, and to follow it out to the very end.

The benefits to be derived from any department of instruction, in our schools for the deaf, whether it be religious or secular, through the medium of speech and speech reading, or finger spelling, and writing, presupposes a knowledge of English, or language. Lan-

guage, in the full significance of the term, is the expression of thought, and thought is the discernment of relationship. Without a subject, there can be no thought. What more fascinating subjects for the development of ideas, and for their expression in language, can there be than those which are dealt with in every Sunday school program? We say, the development of ideas and of language, for we do not consider Sunday school work as a thing apart from the general all-round intellectual development of the child. One of the greatest mistakes we can make is to persist in teaching language as language, as a subject separate and distinct, instead of making every subject combine, and work together, towards the formation of one great language whole. Effective teaching in the Sunday school then, not only depends upon a good fundamental grasp of the English language, but the Sunday school lesson is also a creative factor,—a stimulus to thought. In the course of our own experience, we have found it to be one of the greatest of the agents we have had at our command, for the building up and development of the English language.

We shall not here attempt to outline any scheme of instruction to be followed in the Sunday school, or to make any suggestions respecting the classification of the pupils, or the number to be taught in a class. The arrangement of such matters depends largely upon local conditions. Suffice it to say, that while we do not like the idea of having very large Sunday school classes, wherever it is possible to avoid it, we consider that the size of the class is but a secondary consideration to its proper grading, according to the language attainments of the pupils.

The question as to the advisability of adopting similar courses of lessons to those followed in Sunday schools for the hearing, has to be dealt with. As far as our own experience goes, we do not particularly favor the adoption of the leaflet system, or any other scheme of lessons that has been drawn out for hearing children. We take it that these schemes of lessons, have been adopted on account of the difficulties of obtaining the services of Sunday school teachers who can teach. In our schools for the deaf, the conditions are different. The Sunday school classes are in charge of professional teachers who know exactly the mental capacity of their classes, and who can adapt their teaching to their pupils with the greatest nicety. As we remarked just now, the Sunday school lesson possesses remarkable facilities for promoting the growth and extension of language, and in the hands of a competent teacher an immense amount of good may

be accomplished in practical language teaching, at the same time that he is dealing with the inculcation of religious truths.

As regards the use of a text book, we think it highly desirable that a suitable one should be used. We remember one particularly good publication that we once used for New Testament work for some considerable time. But given a competent teacher, we do not think there is anything better than the Bible itself. We have generally been able to do the best all-round work when our pupils have had their Bibles open before them. Explanations and illustrations are, of course, necessary, as they would be in using any text book, but taken on the whole, the comparative simplicity of the Bible language, its freedom from involved sentences, and the benefits to be derived from a close acquaintance with the beautiful English contained in it, all combine to recommend it as an indispensable agent in the spiritual, as well as the purely intellectual, development of our deaf pupils.

The selection of suitable matter for Sunday school study, is another point to be considered. It seems to us that the nature of the subject, and its mode of treatment, should be our chief concern. The ground to be covered in a given period, is a matter of minor importance. It is an open question as to whether the stories and lessons contained in the Old Testament should be studied before those of the New. The stories of the Old Testament, it has been said, appeal to the younger children more than those of the New, and should be told first, while those contained in the New should be reserved for a later period. This may be the view taken by the pedagogue and the psychologist, but the theologian, we venture to think, would take a different course. He would probably tell us that many of the stories of the Old Testament, however interesting they may be to the young child, can scarcely be considered superior in their results to those of the New. The wisdom of permitting the minds of young children to dwell exclusively upon the events of the Jewish dispensation, when customs and ideas of life prevailed which are entirely foreign to those of the Christian, does not seem to us to be particularly desirable. If we are to follow out the principles of the intuitive method in our Sunday schools, and proceed from the known to the unknown, then, surely, it is advisable to give the preference to the teachings of the New Testament. The beginning should be interpreted from the end, not the end from the beginning. The true aim of the Sunday school, we take it, is not so much to impart a knowledge of Bible history, as to kindle and fan the flame of the spiritual life within the

child. A child may be perfectly familiar with all the stories of the Bible, and yet miss their lessons for today. The connection between the events of the Old Testament and those of the New, the promises concerning the coming of the Saviour and His mission, should receive due attention. In dealing with advanced pupils, we should try to adapt our teaching to their immediate needs and conditions. We do not want to convey the idea that religion is a mournful and effeminate kind of thing, but just the opposite. The day is happily past, when boys and girls, brimful of the joy of living, were expected to take pleasure in the sentiment of such a hymn as, "O Paradise, O Paradise, I long to be at rest."

Then, too, the geographical features of the Holy Land should not be forgotten. Good maps should be provided for reference, and sketch maps might be occasionally drawn by the pupils. By introducing the study of the geography and topography of the countries and places connected with Bible history, we help to make Sunday school work all the more interesting, and give it a tangible form. A Sunday school museum, containing models and specimens illustrating the manners and customs of Eastern life, is a very valuable aid to teaching. The blackboard should be freely used, and the pupils should be encouraged to take notes. We believe, also, in introducing interesting anecdotes bearing upon our subjects, on all occasions, whenever suitable opportunities arise. These form a setting for the lesson, and help to drive home the moral to be conveyed. "Long is the road by rules," says Seneca, "short and easy by examples."

At certain periods there should be a review of the work done, and at the end of the half year, or year, a test given. If possible, rewards, in some suitable form, might be given to those who have done the best work. But whether rewards are given or not, there should be some incentive offered.

In considering the subject of Sunday school teaching, in schools for the deaf, we are led to touch upon its kindred topic, the chapel service, and the chapel lecture. We do so not merely for the sake of discussion, but to endeavor to show that the Sunday school and the chapel, each has a distinct mission to perform. Judging from the immense amount of importance attached to it, in some cases, one would be almost inclined to think that the chapel lecture was the one and only source of moral and spiritual teaching. We seem to have got rather mixed in our ideas respecting this matter. We exalt the chapel lecture at the expense of the Sunday school. We confound

the needs of the adult, with those of the child and the youth. We hear of pupils of all ages and of all grades being assembled in a large room to receive a sermon or lecture. It is assumed that the lecturer is able to reach the minds of all these children. If not, why bring them all in? The answer is, that even if the younger children get but little of the lecture, they benefit in other ways,—the assembling of the whole school, the discipline called into action, the spirit of reverence it promotes, and the offering of united prayer,—all these things, we are told, are in its favor. Now, that the chapel talk has its good points, we will not attempt to deny, but if the main object of the assembly be the lecture, or the sermon, then we believe that far greater results can be accomplished in the Sunday school than in the chapel. In the Sunday school the pupils are assembled in smaller bodies, the lessons are given according to the grading, far better attention and deeper interest in the subject can be maintained, blackboard illustrations of the teaching can be given, and there is time enough for notes to be taken by the pupils. All this is possible in a well graded Sunday school. If we leave out the question of the paramount importance of the sermon or lecture, and give it a secondary place, we must regard the assembling of the pupils together in a body in another light, namely, as partaking of the nature of an act of worship. We regard the adoption of a chapel service book, and the introduction into some of our schools of the responsive service, as distinctive marks of progress. The Sunday school and the chapel have their proper places in our institutions, but as their names imply, the one is connected with the religious instruction of the young, and the other is, or should be, associated with the act of Divine worship. In improving our Sunday school teaching, do not let us overlook the needs of the chapel. In our opinion, the institution chapel should be *a chapel,*—not an assembly hall, a lecture theater, or an amusement hall. The ideal chapel should be a place set apart for the assembling together of the whole of the pupils, and its associations should be such as to promote in them a spirit of reverence. The object of the assembly should be something more than purely educational; the methods of the schoolroom should be left outside. The ideal chapel should be a place of worship.

Sunday school work for advanced classes would, we consider, fail in its object, if it ceased with the study of Bible history. The aim of the Sunday school should be, as we said before, something more than a mere knowledge of the Bible. It should be supplemented by a course of instruction devoted specially to the study of

the faith and duties of the Christian religion. Just as it has been found desirable in the introduction of the responsive chapel service to formulate a Chapel Book, so we think it would be an equally important and necessary addition to the Sunday school to introduce a little book, or course of special lessons, drawn up on broad Christian principles, after the manner of a catechism and embracing the full signification and explanation of the fundamental principles of the Christian faith, the Lord's Prayer, and the Ten Commandments. Merely committing to memory the Lord's Prayer and the Ten Commandments is not considered sufficient for hearing children, and if they need special instruction in these things, how much more necessary must it be with our pupils? These subjects, unless dealt with in a special series of chapel lectures, often get overlooked. Even if they are made the subject of lectures or sermons, they cannot possibly be as effective as when they are dealt with in the Sunday school. Such matters as these are not suitable for lectures to young people.

As we said before, we consider that in many cases we are not paying sufficient attention to the needs of the youthful mind. There is nothing particularly attractive about sermons or lectures to hearing boys and girls. It requires a speaker of more than ordinary ability to hold their attention for five minutes at a time. Why, then, we repeat, should we attach so much importance to the lecture as a means of moral and spiritual development, when the avenues to the mind are not so direct, and when the mental processes must, of necessity, be slower in their action?

In all our work connected with the education of the deaf, both religious and secular, we should like to see more attention paid to the special mind study of the deaf child, for after all, the success of any branch of instruction depends not so much upon the method of communication—speech, speech reading, manual spelling, or writing—as upon the extent of the mental training that has been received. Let us draw a distinction between the lecture and the lesson, the lecturer and the teacher. The one is associated with the adult and the other with the child. Such a course of lessons as we have referred to might be drawn up for two distinct purposes: the one simplified for the use of the junior classes, and the other in a more extended and comprehensive form, for advanced pupils. Where a Chapel Service book is used, provision should be made in the Sunday school for the study of the forms of prayer and hymns contained in it. By a systematic program, the course of study in the suggested

catechism, and the forms of prayer in the Chapel Book, might be arranged so as to devote an equal amount of attention to each.

In summing up our conception of what Sunday school work for advanced grades should be, we would emphasize the following points:

First, that successful results in the Sunday school depend largely upon the extent of the language attainments of the pupils. We cannot expect to have an efficient Sunday school unless we can first produce good results in the day school.

Secondly, that for advanced pupils, we consider the Bible should be used. Although we would give due prominence to the teaching of the New Testament, we would not overlook that of the Old, for it was with reference to the Old Testament scriptures that Christ said,—"They testify of Me."

Thirdly, that the Sunday school has a special mission to perform, and should be regarded as separate and distinct from the Chapel.

Fourthly, that the Chapel should be a chapel, and should be associated with the act of worship.

Lastly, the scriptural teaching of the Sunday school should be supplemented by a special course of instruction upon the faith and duties of the Christian religion.

In conclusion, we would draw attention to the fact that the subject of Sunday school work is one of the greatest importance to us as *Oral* teachers. If we wish to produce the best results in our religious and moral teaching, we must adopt the best Sunday school methods, and last, but not least, we must bear in mind that much yet remains to be accomplished in that all important department of our work—the teaching of language. The results in the Sunday school are as closely connected with, and as dependent upon, the efficiency of the language teaching, as they are in every other branch of our work. We look forward to the time when the subject of language teaching shall be elevated to its rightful position in our training schools. We believe that the final solution of the vexed question of so-called *methods* will be found, not in the form of communication, not in the Oral, Manual, or Combined methods of communication, but in the perfected method of mental development,—of education; in other words, the perfect method of teaching language. To quote the words of a fellow teacher, "Language, using the term as synonymous with, and expressive of mental growth, is the key to the whole problem of the education of the deaf. It opens

up the accumulated wisdom of the ages, and is the only means by which the deaf may be truly restored to the society of those among whom they must live and labor." There is no limit to its application; it is as important in the Sunday school as in the day school, and "the last word on this important subject will not be said so long as the human mind continues to yearn for deepened understanding, and increased knowledge,—not until the finite be merged into the Infinite."

THE MORAL TRAINING OF THE YOUNG.

DR. SAMUEL C. SCHMUCKER, STATE NORMAL SCHOOL,
WEST CHESTER, PA.

My friends, I am to speak to you this afternoon about the moral training of children and I want to say from the first that I have not the same right to speak to you on this subject that I had to speak to you on the subject of nature study. I do not mean that I am not as earnest in it as I am in the other matter, but in the other matter I had perhaps the advantage of you—probably had the advantage of most of you. In today's talk I scarcely have the advantage of many of you; therefore, what I may have to say may be more distinctly liable to question on your part; and yet I have thought the matter over, of course. I have had not only twenty years of teaching, but I have had two children of my own to train, and I have, of course, tried to do what I could.

One of the things that I am surest about in the whole range of the moral training is that we must be very careful indeed that the moral ideas we try to teach to children are not entirely beyond their reach. Honestly, friends, I think we do not realize nearly well enough, when it comes to moral teaching, the difference between the child and a grown-up. We are quite accustomed to that, of course, in our every day teaching. The child students have made us careful enough of the ideas of children with regard to the things in ordinary school life; but, friends, I really think that we begin to train our children to be what we would be, if we were morally developed. A morally developed child and a morally developed grown-up are altogether different persons; and we cannot expect much morality from children. So we must be very careful indeed that we shall not in the first place make too high a demand of our children; and in the next place, we must not feel that their derelictions are anything

very serious. The idea of thinking that a child six years old tells a lie is to me absurd. A child of six years cannot tell what you and I mean by a lie,—cannot tell what would be to you and me a lie. And so we must be very careful how we attempt to get beyond their ideas. And first, friends, I think that one of the simplest elements of morality in a child is kindness; I think that kindness is very distinct morality; and when you can get a child to be kind, you have gained a very decided advantage. Do not talk, to children particularly, about being good. When you say "good," you mean one thing, and they mean another, and just as long as you and they mean different things, just that long you will fail to reach them. That abstract word "good" is too much for the child, I think; that is to say, this: If the child does attach a meaning to it, it will attach too low a meaning, and for a long time it will be hampered by that low meaning. A "good" child is apt to be either a well-behaved child, or, in the household of a nervous father, a quiet child. And therefore, let us see that we get clear-cut ideas of the sort of morality we have a right to expect from children. The first of them is, I think, this question of kindness, of being "good" to people roundabout, that is, of being helpful,—not to disturb, but to be kind to those roundabout, including animals.

In the next place, the child must learn as soon as can be,—and it is not a serious infraction when he does not learn it for a long time,—that the things which are his he may use more fully than he can those which belong to some one else. In other words, there must come a time when the child begins to realize the meaning of property,—begins to realize "thine and mine,"—to understand that with the things that are his own he can do practically what he wishes and with the things that are not his own he must do as the person to whom they belong wishes. Now, of course, that is a very great deal, and is of very slow growth in any child's mind. A child can hardly realize that things are not his own; at first to him they are; he takes hold of anything he can get and nobody thinks of telling him that it is wrong. The only remedy consists of picking them up and putting them out of his way; and it is a very slow process by which the child arrives at the idea that some things are not his own. But that is one of the first things we want to teach: ownership and a respect for the ownership of others. But, friends, children do not steal any more than they lie. They take things that are not theirs, and they must put them back again, but that is not stealing. Do not let us give to these children such horrible names for the things they

do and produce in them so early a sense of having done things that are desperately wicked.

In the next place, naturally we want to begin to teach them something or other about God; and it is very hard. Now, will you realize that when God got to be a factor in the life of men, a genuine, real, compelling factor in the individual life of men rather than in the life of a tribe or nation, was when we had the revelation of God as the Father. That is the one thing that a child can understand, and that you and I can understand. As a matter of fact, we do not know much more about God than that; and to attempt to make it any more to a child, I think, is a grievous mistake. To make God a kind of a figure that stands behind the scenes and keeps the child "straight" is horrible, I think. He must be a father; He must be a loving father; He must be the father who sees without being seen; and I think that is nearly as far as the child can go; and can you and I get very much further with clearness? He must be the father that they do not see but that sees them. They must gauge Him by their father. And blessed is the child that has a father that will put into that word a deep and abiding content. Do you remember what John Fisk tells us of his idea of God? He said it did not seem incongruous to him at that time. He draws us his early picture of God. Away up above somewhere, there was a sort of gallery that ran across the sky, and this gallery had a railing on either side of it. Here was a desk with a great ledger on it, and a tall and fatherly looking gentleman with a long beard had a pen in his hand. He would come and look over the railing awhile, and then he would go back and write in the book. Isn't that a terrible legacy for Puritanism to have given to a child? So when we want to give children the idea of God's moral interest in the universe, of his demand of righteousness on the part of his children, it means more to you and me; and I will try to tell you what I mean by the child's morality and ours. To him God likes and God dislikes as a father likes and a father dislikes; and the good things are the things that God likes and the bad things are the things that God does not like. And I do not think we want to talk about God punishing them; I do not believe that children need know anything about God punishing them. We must sometimes punish children, I suppose. I say, "I suppose." I am not confident that it is true. When Solomon told us to "Spare the rod and spoil the child," we must remember that Solomon had no particular success in raising children. If he had given us advice as to selection of a wife, he would have been a better authority than

he was as to the sparing of the rod. Frankly, I have thrashed my own boy. I have never thrashed anybody else's. I have thrashed my own boy and I have been thrashed multitudinous times, and I am fairly convinced that a thrashing is simply a confession that we are at the end of our resources, and that a wiser person could do without it. Of course there are times when the authority must be carried out; authority must prevail, and if you have no better means, better to use a bad means than not to have anything done. But I am convinced that every time a man thrashes, or a woman either, it is because he is at the end of his resources, and a wiser person could have done without it.

We have had a very delightful contribution to the subject by a preceding speaker of what Sunday should be; and therefore I need not say much of that; but sure it is that Sunday ought some how or other, if we are going to be successful with it at all,—and our parents have not been successful with it,—somehow, Sunday ought to be a pleasant day. It must not be unpleasant; it is a distinctly wrong carrying out of the Sabbath when the child dislikes it. My mother tells me that I asked her one day, "Do I honor you?" "Yes;" and "Do I honor papa?" "Yes." "Well, I am going to stop because this is the longest day I ever knew." It was Sunday, and I had been taught that if I honored my father and my mother, that the days would be long; and long they were.

Now, somehow or other, it seems to me that there ought to be some particular advantage in the Sabbath that we do not get at other times. I do not mean something that a highly trained and exceedingly moral person will realize to be a beautiful occupation, but I mean something that will appeal to anybody; and I like for my own children to feel that Sunday is a day when, after the ordinary duties are over, that is, after we have gone to church and Sunday school, we may get out into the open air. And yet there is a distinct separation from other days. The children do not go swimming and fishing on Sunday and they do not go boating, unless the boat is simply a means to take us somewhere. But there is an outdoor life with a quiet and a peace connected with it, an outdoor life with a freedom from the strenuousness of other days which makes it very pleasant; and I have always liked the summer afternoons out of doors on Sunday. They have always been different from other days, and I think perhaps it has brought it about that to me the one best service that I get all the year round is at 5 o'clock in the afternoon at the New York Chautauqua, when "Day is dying in the west, heaven is

filling earth with rest,"—I heard you sing it this morning. Somehow, Sunday afternoon is sacred to me more than any other part of Sunday,—especially towards twilight; and I can only attribute it to the fact that so often I have gone out into the open air on that afternoon and made it different from other afternoons.

Now comes another question that I think we try to put at children altogether too young, and that is the idea first of all of Heaven, and then of the soul. Will you stop to realize that you know nothing of Heaven? Do not misunderstand me. I believe in Revelation just as you do; but I mean that all the attempts you make to describe Heaven, just as soon as you stop to think them over, you realize are too material for the infinite. John on the island of Patmos in his old age, the man who had the blessed privilege of resting upon the breast of the Master, even John described it in language that to you and me is almost meaningless. I suppose there are few parts of the Bible except Numbers that are less read than most of the description of Heaven as John gives it to us in Revelation. Under those circumstances, don't you see how hard it is to try to give the children any idea of Heaven? And I think we may be content to let it go until they get to be older. Certain I am that to try to tell them anything about the soul is useless. If we could teach them it would be delightful. I do not mean that it is not worth while. I just mean it is impossible. Will you realize that it was a long time before the human race came into the possession of any such idea as a soul? And your idea and mine of the soul today is most hazy. What convnced me of this more than anything else was my attempt with my own boy. My boy was about four years old when he first saw death. One of his companions died, and he and his friends spoke about it, and he came to me with a crude and materialistic conception, that I was most anxious to correct. He said, "Papa, have they put him in the ground yet?" I tried to tell him that his little companion was not in the ground, that he was in Heaven. Then I spoke to him of the soul as best I could, and I suppose the thing that I emphasized more than anything else was that it was only the body that they buried, and that his soul was in Heaven. The boy received it wide-eyed, as they all do, and they go away and you think you have done something. You do not realize that you have not. Because they listen so attentively to you, and your lesson was apparently a good one, you think you have done something worth while. But I saw my folly in a short time. It was not very long after that another companion died, and

the boy came to me with the question, "Papa, have they cut his head off yet?" "Why," said I, "what do you mean?" Said he, "You told me they just buried the body." Now, friends, I tried hard; I do not believe that I am so unskillful a teacher as to have gone so wide as that; I feel convinced that the difficulty was that I had no business trying to teach a child of that age anything about the soul. It is simply impossible. The soul is one of those abstractions that you and I cannot have a concrete conception of because it is not a con-concrete thing; we cannot have any clear conception of it at all. It must be a very morbid child who is interested in it or cares about it, and even then, he cannot get any distinct impression of it.

First then of all: let us get clear in our minds the qualities that stand for morality in a child and which will afterwards develop into the morality of the adult.

Second: I believe that teaching should be positive instead of prohibitive. We should teach them what to do; not what not to do. You remember of course the old story of the child that came to the grocery store and wanted a penny's worth of peas. The grocer wondered what the child wanted with them. He said his aunt was going away that day and she had told them not to put peas in their noses. That sort of thing is the result again and again of our trying to teach with negatives. We are told again and again of the cruelty of children. The State of Pennsylvania has demanded that we shall teach the equivalent of ten minutes a day lessons prohibiting cruelty by children. Now, I am convinced that children are not cruel. I have studied that question so often that I am convinced of it, because you see my work has carried me into contact with children and animals. Now, children do lots of things which if you and I would do them would be cruel. For instance, a friend of mine showed me a trick that I have never taught anybody else; he taught me how I could tickle a grasshopper so that he would throw away his hind leg. Everybody I tell that to is just keen to know how I do it. I won't teach you. It is cruel. But friends, it was not cruel in the child. It was simply thoughtless. I want to tell you something that happened just outside of my own town. I was riding on my bicycle one day and as I passed out from the town I came towards four boys out in the country road evidently having a splendid time. When I got up to them I saw what the fun was. They had caught a field mouse and they had taken about ten feet of string and tied that to the field mouse's tail. The field mouse would run, and of course when he got to the end of the string he

was held up. They pulled up the string and the mouse would swing back, and the minute his feet would light on the ground away he went again. Then he would swing back, and they were just enjoying this thing splendidly. As I passed them, without any deep design,—but I planned better than I knew,—I said, "Boys, is it quite fair for four big boys to be after one little mouse?" Now, I did not expect it to have any effect; I did not count on any result. I simply rode by. These were not boys that I knew; I had no authority over them; and I went on. But after I got past them, somehow it occurred to me to wonder whether what I said had had any effect, and I looked around without getting off my wheel. I saw that the boys were gathered together and were discussing something or other. So I turned my wheel and came riding back, and when I passed the boys I rode slowly, I did not want to stop,—that would have destroyed all the spontaneity of the occasion. As I rode by I heard one of them say, "No, sir, if we let him go here, he can't find his way home." Do you see, it was simply a question of viewpoint, and just as soon as they stopped to discuss the question at all, not only did they realize that it was not a question whether they should let the mouse go, but here was the one fellow that insisted that they must take that mouse back to the field where they found him. The mouse would have found his way home safely enough if they had let him loose, but that doesn't matter,—those youngsters got over that fence and carried that mouse across the field. I wanted to see those boys as long as I could and I knew to follow them would spoil the whole thing; so I got over the fence and out into the field towards the swamp; I just gave myself an object there in a fern; I remembered that the regal fern grew in that swamp. I started out to hunt the fern in that swamp. The boys saw me go down into the swamp and they began to watch me and of course that was better still, because that kept them watching me and they did not realize that I was watching them. One of them said, "What are you looking for?" I said, "I am looking for a fern." He said, "You had better look out." I said, "What is the matter?" "Why," said he, "there are snakes there." I said, "That doesn't matter." "Yes, it does," he said, "they will bite you." "No," I said, "they won't bite me." I want you to catch the psychology in what happened next. I want you to see the boy's sense of pride in his father, his sudden new standard of cruelty, and his defense of the father for whom he had respect. He had said, "They will bite you," and I said, "No, they won't;" and this boy began and said, "My father killed a"—, and

he stopped just like that, and then he filled it out,—"My father killed a snake the other day; he just had to." Now, friends, when in a few minutes, by one question, four boys who were engaged in what you and I would undoubtedly call, if we were thoughtless in the matter, cruelty to animals, can be changed like that, you cannot make me believe in their inherent cruelty to animals. Infant depravity has no place in my creed.

The next thing is that if children are young, there are two kinds of things to teach them: First of all, direct stories, and second, distinct commands. There is no use of going too far into reasons with young children. I believe that it is enough for a child that papa likes an act, or papa does not like it. I believe it may be enough for a child if God likes him or God does not like him. Don't you think today that three-fourths of the Christians in the world believe that things are right or wrong because God says so, instead of having seen down into that deepsr idea that God says so because it is right? I believe then that they ought to have stories more than anything else. I believe a story that has a definite moral to it is the distinct story for the child; but these morals must not be too definitely pointed. I had the story of Ananias and Sapphira read over to me when I was six years old because we had a box in the closet in which we kept pennies for the girl to buy milk with, and I took pennies out of the box and I went to the candy store. They read over to me the story of Ananias and Sapphira, and I read it to my brother then; I told him the story; I passed it on. I don't believe we want to make these stories too pointed concerning some present infraction, and I will tell you what made me think of that more than anything else. I wonder how many of you have had what to me is the inestimable privilege of having heard Maud Ballington Booth. I think I have a greater admiration for Mrs. Booth than any other one woman worker in America today. You know her work; every big penitentiary in this country knows Mrs. Booth, because she goes to those penitentiaries,—and it is not a question of "I am holy, and I am coming here to help you out." She is the "Little Mother" to the convicts; and they all know her as "Little Mother," and there is no cell in this country into which Mrs. Booth cannot go. There is not a penitentiary official in this country that is not rejoiced if Mrs. Booth comes into that penitentiary. She has stations every here and there: one near Chicago, one near New York, one near San Francisco. She has stations where the men go when they come out from the penitentiary, when they are her graduates,

her boys. When they graduate, when they come out, she just says this: "When they have served their sentence, I take it that they have paid the debt, and we never talk about it." And those boys come out and she takes them to a farm in the country and there she lets them work in the open air and the sun until they forget to start when they hear somebody behind them, when the prison bleach has gotten off their face, when their feet will work like yours and mine and they get out of the awful lock-step that tells of the men that have been in the penitentiary. Then she hires them out to somebody who knows their story and is willing to trust them in spite of it,—and these men get a chance. They all call Mrs. Booth "Little Mother." She told a group of us up in Carnegie Hall in New York of how just the day before a big carter had driven his cart up in front of the house and had jumped off his cart and come in. He said, "Good morning, Little Mother, I just came in to shake you by the hand," and added, "You don't know how much good it does us to hold you by the hand; you don't know the good you did to us: you never talked to us about the prodigal son." Oh, friends, "you never talked to us about the prodigal son." Have you ever talked in a prison? Will you ever talk about the prodigal son again, if you have? Do you remember a poor stricken woman who sat before the feet of the Saviour? Do you remember how the men had treated her there, for she had been caught in the act. If our best clergyman today had had to do it could he have refrained from advising her? She had confessed to her bad life. Did the Master say anything to her? Did he speak to her about anything No, no; only, "Go and sin no more." Sometimes, to strike right in after an offense has been committed is simply to harden. Have you had a child of your own who has done something worse than he ever did before? Have you realized that it is the worst thing the child has ever done, and then have you realized that now is your time to put your arm around your boy? You dare not punish now. How it will help you when you remember that that sin that you thought you had drowned out twenty years ago is here today, and the poor boy has it, and it is yours. Friends, I do not know anything to make a man careful of his children like the consciousness that their faults have come to them from him. And so it is, friends, that there is no such moral teaching like the force of a good moral life,—just a teacher that is above reproach in the face of his pupils,—the teacher that the pupils never meet around the corner doing something different from what he does at school,—the teacher whose whole life is a clean

moral struggle; he may fail too, sometimes, but they know that it is a struggle and that he did not give up the struggle. That is the thing that will tell more than anything else that you can possibly do for a boy. And now, I think that we are just beginning to realize one other side of this problem and it is the most hopeful of all. I wonder how many of you have had the good fortune to come across a new book this year. President King, of Oberlin College, has made a book which he says in his preface is without originality; he quotes James and Wood and all the rest of the psychologists, and it is true he does quote, but he has marshaled a most magnificent array; and it will do us good, every one, to read it. It is not hard to read, because King of Oberlin has talked to his boys until he knows what people can understand of psychology. If you get a chance, read King's "Rational Living." It is not a health food fad; it is not getting up early in the morning; it is simply an application of the principles of modern psychology in every day life. It is an answer to that question that has been asked time and again: Has all this phlosophy nothing to do with common living? It is King's answer. I do not believe one of you can get up from that book without a clearer determination of what there is in you that is worth fostering and worth teaching. That book helps to emphasize something that I have been sure of every day. I believe there is magnificent moral training in the boy that when the rising bell rings, gets up,—does not wait until he can just scrape in at breakfast time, but gets up right there,—does not stop to wonder whether he can have more time or whether he hates the bell or anything else, but just quietly gets up; and the beauty of it is that you have not done it a week before it is perfectly easy. If you will start right, make up your mind the night before,—do not stop to fuss around with it in the morning, making up your mind the night before that when the bell rings "I get up," and next morning, when the bell rings, *get up*. The first thing that happens when that bell rings in the morning, is that your mind says to you, "get up." You have it all ready the night before; that gun is loaded, and the bell simply pulls the trigger, and off it goes. Now, friends, get up, and get up tomorrow; make up your minds the night before; get up tomorrow, and do it for six days in succession, and then when Sunday comes you can't sleep if you want to. There is no hardship about getting up in the morning or in getting up at any hour of the day at all. The only hardship is getting up earlier than you are accustomed to. It is just as easy to get up at 4 o'clock as at 7 o'clock or 9 o'clock. But there is, I believe,

immense training in responding like that, and when the breakfast bell comes you just have not any other notion than of being there on time.

Now, friends, that may seem a low order of morality, but I tell you I believe it is the most powerful factor in teaching morality that you can possibly get. I believe the prompt and immediate attention to every little duty that comes before us is the one greatest discipline of our lives. I believe in the man who always is there when he says he will be there, who, when he makes an engagement puts it down in his book, and is there when that engagement comes. He does not think of such a thing as getting out of it, it must be an intervention of Providence that makes him get out of it, and he is going to be there because he said he was going to be there. If anything else comes up he says, "No; I can't; I am due here." I believe that is better discipline than anything else we have. It certainly is better than listening to instruction. Listening to instructions is as nearly profitless ordinarily as it can be. Dawson, of England, now in this country, I heard say to that enormous audience at Chautauqua—picked people, if there are any—Christian, intelligent people, men and women who had come there because they wanted Christianity—to an audience like that I heard him hurl: "You sermon saturated pagans of the pews." Do you know what the trouble is? King will tell you. Sunday after Sunday you and I sit there and a good man, may be, a thoroughly good man, tells us something and he gives us emotions. Now, friends, every emotion that we get that we do not carry out in action weakens us. When you sit there in the pew and somebody pleads eloquently for the sufferers of San Francisco and your heart burns, and you reach down in your pocket and there is nothing quite small enough, nothing you can spare, and you go away; it had been better that you were not there. And so I have learned one thing, if I have learned anything in my talk to my pupils at the school, and that is this: If I have a religious address, there is something *definite* for them to do *tomorrow*. I have no confidence myself, under ordinary circumstances, in talking to them as if here was something they ought to do from now on forever—for the rest of their lives. It takes great power to change one for life; but if you can get your pupil to agree that tomorrow, for instance, he is going to be on time in everything all day long—just all day long on time to everything—you have started a good trend. If you have your pupils to feel that tomorrow they are not going to make a

tart reply or say a sharp thing to anybody all day long, you have gained something.

So I believe in those talks which have in them a one definite thing to do the next day, or *that* day, and not general talks as if you were reforming them for the rest of their lives. And so we can make all our daily work, if we will but do it well, the strongest factor in our discipline. Do you remember that most modern in spirit of recent verse:

> "Forenoon, and afternoon, and night; Forenoon,
> And afternoon, and night; Forenoon, and—what?
> The empty song repeats itself. No more?
> Yea, that is life; make this forenoon sublime,
> This afternoon a psalm, this night a prayer,
> And time is conquered and thy crown is won."

MR. JOHN E. RAY: Mr. President, I am so delighted with the most admirable address of Dr. Schmucker, and so thrilled by its inspiring thoughts, that I do not want to have the impression made upon me spoiled or marred. I therefore move that we adjourn.

The motion, being put, was carried.

At a meeting of the Board on Sunday evening, by resolution presented and adopted, it was determined that full proceedings of the Summer Meeting shall be reported, transcribed, and printed unless otherwise ordered. Mr. Lyon contributed one hundred dollars toward the cost of publication.

On Monday from 8:30 to 9:15 a. m., and daily thereafter at the same hour, class work representing primary, intermediate, and advanced grades, by pupils of the Western Pennsylvania Institution for the Deaf, and demonstrating arithmethic methods, by pupils of the Illinois School, was presented in the school rooms, the exercises being largely attended and arousing much interest.

The papers presented on Monday, Tuesday, Wednesday, Thursday, and Friday follow in the order of their reading.

THE FIRST YEARS OF THE CHILD'S LIFE IN THE INSTITUTION.

EMMA ROSS THOMPSON, INSTITUTION FOR THE DEAF AND DUMB, MT. AIRY, PHILADELPHIA.

The work carried on in the Primary Departments of our Institutions will be taken up in detail by three very competent speakers, Mrs. Hurd of Providence, Rhode Island, Miss Glenn of the school at Indianapolis, and Miss Kent of Jacksonville, Ill.

These teachers, through their wide experience and knowledge of the course in its every point, will outline it so clearly for you that I feel there is little for me to do but to say a few words on general lines of education.

It has been more or less of a surprise and disappointment to me, a teacher, to find in my recent reading a bitter criticism, by some of our best men of today, of the schools of their youth, upon which it seems to me they should be able to look back with pride and the feeling that to this first "open sesame" they owe much that is good in them today. But instead I find Justin McCarthy in An Irishman's Story utterly condemning the school to which he was first sent. This is what he says in part:

"I trust that there were some little boys at that school who possessed intellects of a more inquiring order and who therefore derived some benefit from the lessons drilled into us.

"I spent, I think, some two years in that school and I can confidently assert that I learned as little as it was possible for any human being to learn even under such conditions."

Again listen to the testimony of Jacob Riis. I shall give it all, both for its many suggestions as well as for his own inimitable way of telling it:

"Now that I am back home I can tell of another surprise that befell me, if the little people can be left out the while; they might not understand.

"It was when I looked my classmates from the Latin school over. There were fifteen of us and thirteen took the straight and narrow road. They were good and they prospered.

"Hans and I were the black sheep who perennially disputed the dunce's seat on the last bench and disputed pretty much every thing else.

"It seems we never found the time to learn for fighting, and the class felt it, no doubt, as a relief when we quit out of season, Hans to go into business where he belonged and I to learn a trade.

"And now after a lifetime what was my surprise to find that of the whole fifteen the only two whom the King had singled out for decoration, with his much coveted cross, were Hans and myself.

"It came to me with a stunning sensation when I saw the ribbon pinned on Hans' coat that afternoon, and when we were together in his home at tea, it worked into my consciousness.

" 'Hans,' I said, 'did it ever occur to you'—he stayed me with a motion of his hand.

" 'Jim,' he called sharply, 'time you were at your lessons,' and not until the door had closed upon the reluctant retreat of the son of the house did he turn to me with a twinkle in his eye.

" 'Yes,' he said, 'it did, but on your life, don't let the boy hear; he's in it now.' "

And Andrew D. White in his autobiography tells of his caring so much for his education that when he found himself placed in a small college in the western part of New York, where only the poorest of teaching was done and discipline a thing unknown, that he was willing to risk the displeasure of his father by leaving the Institution and returning to a former tutor.

Through persuasion and determination he finally reached Yale, the goal of his ambitions, only to find to his sorrow, recitation by rote and gerund grinding demanded by tutors, who were endeavoring to earn sufficient money to enable them to pass through the divinity school. And this was followed by little better in his junior and senior years.

These seem pretty severe criticisms. These men have not been failures: surely the schools should have been better fitted to their needs. The dunce's cap hardly fits Jacob Riis, and from the warm-hearted man we know today, I cannot look back upon a vicious boy.

McCarthy gives later in his book a loving history of his experience with a teacher to whom he was afterward sent, and who really taught him. A chapter in which there is more true pedagogy and inspiration for a teacher than in many of the more formal books upon the subject.

And Andrew D. White in his senior year was sent for by Dr. Porter after a debate, in order to discuss his speech. He says:

"Thus began a warm personal friendship that lasted through his professorship and presidency to the end of his life. His kindly criticism did more for me than any prize ever could have done. Few professors realize how much a little friendly recognition may do for a student. To this hour I bless Dr. Porter's memory."

What must have been the fault then, and is the trouble now? I think perhaps a failure on our part to remember what education is—a development—physical, mental, moral, and spiritual. You can't separate them; they are so interlaced and intertwined and dovetailed that without each part developed you have a warped result, a one-sided man. You might as well expect to pull the blossoms off the tree and have apples grow, as to have a true man whose mental powers only have been trained.

Teachers make an idol of a curriculum, forgetting that the teaching of facts is but one part of their duty to their children.

All I ask for is fair play. Fair play to the teacher? Yes; but fair play to the child, too. A class in school is not a yard-stick cut into its component inches, each piece of the same size, sense, and proportions, but a group of children, the sweetest creations of God, little human beings, with bodies and minds, hearts and souls, all ready waiting to be shaped just as we teachers chose to do it. For you must remember that in these Institutions where we are working, the children come to us all but just born, at that tender, loving age when every impression is so keenly felt, and the man of after years made or marred, by the influences of the surroundings in which he finds himself compelled to live during these early formative years. He never knows a mother's care. What a responsibility is ours!

And we have such a splendid opportunity with our small classes to study the peculiarities of mind and temperament of each child. Pay less attention to the class as a whole and more to the individual.

It is an easy matter to plan that a class shall do a certain amount of work in a given time, feed the material into the machine, and grind it out. But I find there seems to be no place for him who is just a little different from his fellows, either better or worse, as we understand these terms.

I hear so often, that this pupil cannot understand the subject matter taught, and so does not belong in this class, or that this one takes no responsibility upon himself; but I do not think I have ever heard a teacher say that she has failed to study this child and so does not know how to reach him, which I fear is too frequently the case.

But we must make these studies, make allowances for temporary or permanent disability, for power in some directions, and for weaknesses in others. In short, try to find out on what lines the child can work best; strengthen his weakness if possible, but never

let him feel that because he cannot excel in all ways, or reach a determined point, that he is stupid or hopeless.

All children cannot do the same work; all children cannot reach the same results. Study the child sympathetically, to bring out what is best in him, caring nothing for the fact that he has not learned just what you determined he should at the beginning of the term.

Would that we could all have said of us what was said of Professor Shaler, of Harvard, this spring: "His death diminishes the altogether too small number of men in whom specialized scholarship did not make impossible broad culture and human sympathy. He was a standing refutation of the notion that, in a large university, the relation of the undergraduates to the most eminent of the professors is necesarily impersonal."

And a great part of his power at Harvard was explained by his own saying: "I hold it a part of my business to do what I can for every wight that enters this place."

Teachers complain of unfavorable conditions. True, but there always are and there always will be conditions, and there always will be teachers found who can master conditions to a great degree.

The school is made by the teacher; there is nothing I believe in so thoroughly as I believe in that. Her spirit dominates the whole and gives its character to it. If she is enthusiastic, the school is enthusiastic, too. If she has high ideals, the school stands for high ideals. If she is happy in her work, the children love to learn. If she is earnest, progressive, wise, these all show in the training the children receive.

I hear teachers at these meetings lately instituted, where they may meet the parents of their children, beg for co-operation. They do what they can in school, but they cannot control simple diet, dress and pleasures, regular hours and early bedtime.

We have none of these to ask for. Children are not sent to us to school after having eaten a foolish breakfast, or perhaps no breakfast at all, unfit for work, as so often happens in our public schools. If our children have defective eyesight it is immediately treated by an ophthalmologist. All physical ailments are cared for by eminent physicians. Work and play are so arranged that neither hinders, but each helps the other. We have no fretful dispositions or bad tempers to deal with, caused by the over-indulgence of fond parents. We have little to murmur of in the way of unfavorable conditions, it seems to me.

And the thought I wish to leave with you is simply this, to study sympathetically each child under your care, fulfilling his needs rather than your own ambitions, always remembering that in our peculiar kind of work every corner of the child's life has to be rounded by us.

As to my methods, I hesitate to speak, for your own are probably much better. I feel very much as we are told Huxley did: "As to methods, generally it is nothing more than developed common sense." One may be very well versed in the best of methods, and yet be a very poor teacher, for no method is successful without the tact that comes from careful, cautious practice.

There is, however, if you care to hear it, one thing that has always helped me in my own work, in the doing of those little things so easy to neglect, and often so hard to fulfill, and yet of so great importance to the children, and that is, the remembrance of the simple text, "Inasmuch as ye do it unto one of the least of these, ye do it unto me."

PRIMARY LANGUAGE WORK.

ANNA C. HURD, INSTITUTE FOR THE DEAF, PROVIDENCE, R. I.

Some one of my contemporaries has said, "Of these three—speech, speech-reading, and language—the greatest of these is language." I am entirely in accord with this sentiment, for upon language depends intelligent speech and speech-reading.

"Language is the expression of ideas by human words." To teach the deaf to select and combine words or express ideas clearly, exactly, and easily is an art of no mean order, and our first and last effort in the education of the deaf should be directed to the teaching of language.

Primary language work is of great importance. The child during these first months and years in school must learn the purpose of language and must have the opportunity to use it constantly and to see it used, for by using it, it is learned. I do not advocate a haphazard use of language, but a systematic plan in its use, and it is of such a plan that I am asked to give you a brief outline.

With a class of normal deaf children, entering school for the first time, I employ sense training exercises first, followed by voice development and the teaching of the elementary sounds of our language, singly, in combination, in words, and in short easy sentences, given for the purpose of securing continuity and smoothness of speech.

The meaning of words and sentences given in this manner should be made clear, for I do not advocate parrot-like speech, even at this early stage.

During this period the pupils should be addressed by speech, no matter whether they comprehend all or not; the habit of looking to the lips is being formed, and they will be better speech-readers for it. With an average class in age and ability, this work thus briefly mentioned can be done in about six months.

Then, I begin systematic language teaching, using speech, speech-reading, and writing as the means of communication. The child must see the idea first, which the words represent. For instance, I may say, "John fell and cried," and the words convey no mental picture at all; but if the child has seen John fall and seen the tears running down his face, the mental picture is made and the words have a meaning. For this first work in sentence making I have never found any better way of presenting the idea than the old-fashioned action work. But when the meaning of a word or form has been made clear, one should never lose an opportunity to use it and to lead the child to use it—to apply the language that is taught.

It is here that the skill of the language teacher is shown. It is one thing to go through a program of language drill exercises, but quite a different proposition to get each of ten pupils to make ready and natural application of what has been drilled upon—for drill is necessary, very necessary to secure accurracy.

Outline of Primary Language.

The First Year.

This, it should be understood, covers the last half of the first year in school, and the first half of the second year with an average class. A very bright class has covered the work during the first year.

Nouns.—About 200. (This includes all nouns they have learned while developing speech.) Singular and plural number and possessive case.

Adjectives.—About 25, including ordinary colors, numerals to 10, good, bad, sick, etc.

Verbs.—About 75.

(*a*) Imperative form.

(*b*) Past tense.

(*c*) Future tense.

(*d*) Present tense of to like, to want, to love, to have, to know, to live; declarative and negative forms, do not, and did not.

(*e*) To be—present, past, and future.

(*f*) Auxiliary verbs—do, does, did, shall, and will in negative forms, can and cannot.

(*g*) Infinitives—a few such as came *to see,* like *to sew,* want *to go.*

Pronouns.—Simple personal pronouns, singular and plural numbers.

Articles.—Used with nouns.

Prepositions.—A few.

Interrogative Forms.—Am? Are? Is? Were? Was? Will be? Do? Does? Did? Shall? Will? Can? Have? Has? What color? How many?

The meaning of the interrogatives Who? What? Where? Whose? Whom? When? should be brought out and developed in connection with sentence building, but the complete questions should not be attempted.

Sentence Forms.

(1) One subject and one verb.
(2) One subject and two verbs.
(3) Two subjects and one verb.
(4) Two subjects and two verbs.
(5) Compound sentence.
(6) Compound sentence where one verb has two subjects.
(7) Compound sentence where subject of one clause belongs to two verbs. Example: John ran and Joe threw a stone and hit him.
(8) Simple transitive sentence.
(9) Simple transitive sentence with two or more objects to verb.
(10) Compound transitive sentence.

Time Expressions.—A few such as yesterday, to-day, to-morrow, to-night, this morning.

Conversations, news, letters, questions, using the above.

The Second Year.

The Prepositional Sentence.

(*a*) Intransitive verb with prepositional phrase.

(*b*) Transitive verb with prepositional phrase.

(*c*) Sentence containing two prepositional phrases with same verb or different verbs.

Because.—In declarative sentences and in answer to Why?

The Negative Forms.—Would not, could not.

Complete Question Forms.—Using all interrogatives previously given in first-year course; also What——do? What——will do?

The use of the definite article.

The verb to think.

Ask and tell.

Asked and told (begun).

Conversations, news, letters, questions, and answers are required.

THE THIRD YEAR.

Asked and told (completed; all forms given).

Verb forms.—The present progressive, the past progressive, the infinitive in answer to the question What———for?

New Question Forms.

What———doing?

What———for?

Which?

In this the third year regular work in reading is begun. Simple stories of child life, animals, and nature, in which the language forms that have been taught appear, are to be read.

These stories are frequently reproduced in the pupil's own language. They are never committed to memory. Similar stories are told for speech-reading.

Primary language work—proper—may be considered as covering only the first three years, but it is a mistake to cease systematic language work at this point. The teaching of language has been begun only. The work during the succeeding three years is of equal importance.

I follow the same plan through the fourth, fifth, and sixth years, outlining each step.

More difficult constructions, common idioms, the remaining verb forms, etc., are taught thoroughly and applied. This is the period, I believe, for the acquisition of colloquial and idiomatic expressions.

The reading grows more difficult and comprehensive with each grade. Longer, more difficult exercises are given for speech-reading, and we can now use language to interpret language.

In the fifth and sixth years original stories and conversations and other exercises intended especially to bring out the imagination are required, and general questions are asked which require the exercise of judgment and reasoning power to answer.

In the sixth year the reading course has become so extended that the idioms and new expressions found in the same furnish the basis for a large part of the language work, but work upon the conjugation of verbs, the perfect tenses especially, is to be completed.

The full results of such a plan of primary language work as I have outlined are not evident during the elementary years. The influence of such work is far reaching and extends through all the years.

Correct methods of acquiring knowledge, right habits of thought and of study are formed, and the effect of these is never lost.

SPEECH AND SPEECH READING IN PRIMARY CLASSES.

FRANCIS L. GLENN, INSTITUTION FOR THE DEAF,
INDIANAPOLIS, IND.

The work of an oral class is of a three-fold nature; that is, it should be given by means of speech, speech-reading, and writing. These three phases of the work are so closely associated, each with the other, that to speak of one implies the speaking of the others. Yet, there is a distinctive feature to the speech and speech-reading that gives them a character of their own and makes it possible to consider the work of the class from the point of its oral expression of thought.

After the elements have been taught and a vocabulary of words and sentences is being acquired, speech and speech-reading become, as it were, the outward manifestation of the more exact constructive under-thought of the written form. So the method that makes language in its written form a living, vital force in the life of the child ought to be the one that gives speech its living, vital expression. But back of the method that combines within itself these elements of success, must be the teacher with high ideals and definite aims, knowing not only *what* but *how* to teach; knowing not only the theory but the practice.

It is for the teacher to determine whether the spirit of speech shall rule the class and whether the work shall be such as to bring into healthy, vigorous action the mental powers of the child, or whether, through want of interest, they shall grow sluggish or rebellious. The teacher always stamps her own image on her pupils, and nothing can atone for the lack of the animating spirit that calls forth the child's best faculties and arouses in him the desire to take his full share in overcoming the difficulties that are met with in each day's work. But this right spirit should be the outcome of correct views and good judgment. There should be well-defined plans for work and reasons for the plans; there should be a method of teaching that will make speech the spontaneous expression of thought, and there should be a way of making all the means used tend to one harmonious whole and aid in the development of the mind's best forces.

Although speech in the primary class, in its every phase, is of the simplest nature, it contains within itself the laws of all speech, and as it grows and develops it represents the method used, not only in the special work of teaching speech, but the method used in the development of the written expression of the child's thought. It implies that the teacher has not worked with reference altogether to immediate needs, but that, seeing the end from the beginning, she has worked toward that end intelligently, steadily, successfully. She leads the child from his first day in school through the work preliminary to the teaching of the elements; she has a definite order in which to teach the elements and a reason for the following out of that order; she knows the value of the drill to future speech-reading that is to be found in recognizing the elements, and she knows how to make that part of our language which takes the form of simple commands or requests, not only a pleasant exercise in speech-reading, but of educational value to the child; she also knows how to watch the voice and begin the work toward its correct placing and development that means so much in the way of pleasing speech.

From these very small but all-important beginnings, she leads the child to the place where he uses spoken words as the expression of thought and recognizes the spoken word as the symbol for a thought; in short, where the child, limited though he may be, has begun to think in speech. When this point is reached, the systematic drill in language enters largely into the speech of the class. The value of this work from the standpoint of speech will depend largely upon the fact that the method of teaching language is one

that will actualize the knowledge gained, that will develop the mind and render it capable of thinking in an orderly way, enabling it to give such accurate expression to thought that the child will, in time, think in speech and be led, much as the little hearing child is led, to give natural expression to his thought by means of speech.

From this point of view, apart from its specific value as a system of teaching language, the McKee Method, as used in the Indiana School, fulfills in almost every detail the requirements needed in aiding the formation of the speech-habit and of rendering speech the natural medium for the expression of thought.

It is a system wherein the sight in large measure takes the place of the hearing. It keeps before the pupil a number of rules in sentence construction that enable him to give expression to thought through the knowledge he has of the framework of our language, or of the sentence structure, rather than of the sentence itself.

It teaches not the meaning of independent words, phrases, or sentences which must be carried in the memory and which do not give him definite laws for further expression of thought, but it actualizes his knowledge in that it teaches him that the rules which govern one verb in its changes for tense, person or number, govern all verbs; and that the rules which apply to one word of a given class apply to all the words of that class. With this knowledge as a foundation he need spend little time in thinking of words as words, but only of words as a means of completing the sentence, the structure of which is already clearly in mind.

His advancement is measured not so much by his vocabulary as by the number of verb forms he understands and is able to make subservient to his needs. This framework of language is that which is kept on the wall slates for constant reference, while the vocabulary, as such, becomes joined to the mind as a part of itself to be called upon as needed in building up sentences in an intelligent, logical way. In this way his vocabulary becomes a means to an end, and that end is that which most nearly puts the deaf child on a plane with the hearing child and enables him to express himself by means of correctly constructed sentences.

All this language work of the class should be given with the thought of its finding its medium of expression in speech, just as truly and as accurately as in writing. Throughout all written work in sentence construction the speech should be kept well up with the written form. Words which are used, or are to be used, in the written sentence should be drilled on until the vocal organs take the

positions with ease as well as accuracy; and these written lessons which were planned by the teacher to serve a certain purpose in mental development should be associated in the thought of the child as serving the same purpose in the spoken form. Wherever speech is used the lesson should also form an exercise in speech-reading, the one supplementing and completing the other.

Aside from this closely associated expression of the spoken sentence with its original written expression are those exercises which are given more directly from the point of view of speech and speech-reading. These exercises begin with the elements, and then pass on to the combination of elements into words, and finally of words into sentences. All of this work should be preceded and supplemented with breathing exercises and tongue and voice gymnastics, for a good voice is the foundation of all pleasing speech, as good elements are the foundation of all clear speech.

No one part of the work should be neglected or allowed to suffer because of any other part. Every force in the school room should be equalized in order that progress may be even and complete within each step and a well-rounded, well-developed mind be the result.

One of the most efficient means of arousing the spirit of speech in the class is to be found in the reading lessons. In these, much of the special articulation and voice work may be reviewed and the general exercises of the class, or the more specific individual work that is given each child before the large mirror, may here be applied in the reading of the group of sentences that cluster around a picture. The lesson may be preceded with tongue gymnastics and the voice exercises may be repeated with the purpose of having the voice placed and the correct tone held throughout the exercise. Different elements in the lesson may be drilled on and the words found in which these elements occur, thus aiding in bringing about that perfect familiarity with elements which is the key to ready speech-reading.

In addition to all this special work which the lesson affords, is the conversation which is made possible about the story told by the sentences, about the picture which illustrates the story, and from the thoughts that are always to be drawn from each child's individual experience. These questions and answers are always a source of delight, and may be between the teacher and pupil, or, oftentimes, between pupil and pupil.

Even in these reading lessons the written form comes in for its share of consideration. Answers to questions, or the questions themselves, should be written whenever there is the least doubt as to accuracy or clearness. These sentences can be written with scarcely an interruption to the recitation, as it takes but a very short time for a child to run to the five-slate division and write the answer to a particular question, or, on another wall slate, to write the question itself. While the writing is being done the rest of the class, or division, may be repeating the same thing by speech, or the moment until the writing is finished may be used by the teacher with some difficult voice toward getting it correctly placed and ready for the next sentence that is to be read. The difficulty lies not so much in arousing the spirit of speech and in enthusing the class as in keeping the children from feeling that one child is being called on more frequently than justice may permit.

It is some such outlook as this that the young teacher should have when she enters upon her work. This outlook, having for its foundation a knowledge of the underlying principles of education, gained in her years in training, supplemented by her technical knowledge of the development of the elementary sounds of our language, a general knowledge of vocal physiology and of the principles of voice culture, will make it possible for her to take up her work and, in time, become a good teacher.

There must, however, be an earnestness and steadiness of purpose that will add daily to the experience that will broaden and deepen the knowledge gained in her training. In these first years, standards of perfection should be so high and belief in speech and speech-reading, as two of the most potent factors in mental development, so all-absorbing, that every difficulty to be overcome and every obstacle in the way will be to her as stepping-stones to that higher understanding that comes through wider experience and from more definite knowledge of ways and means of reaching the child.

High ideals embody within themselves the laws of their own unfolding and go far in making up for lack of experience and in enabling the teacher to take her place in working toward that great end of education—the harmonious development of heart, mind, and soul.

In no part of the teacher's work is the drawing out of the mind's best forces more marked than when considering the work from the view-point of speech and speech-reading, and in no phase of the work is the response of the child to the teacher's thought

and influence more necessary. Without this response on the part of the child, speech and speech-reading will remain mechanical—something external to the child's thought and purpose. There should be perfect unity of thought and action between teacher and pupil, and all the work of the class-room should be so planned that speech will not be a desultory and purposeless act, but spontaneous and full of thought and expression.

Whether or not the child receives his daily instruction through speech, and finds in speech the most natural means of expressing thought, rests largely with the teacher—particularly with the teacher of the primary class. It is in these first years that habits are formed and foundations are laid, and there should be on the part of the teacher such understanding of and preparation for each day's work that her whole strength may be given to the need of the moment or the hour without thought of what is to be done next. Clear purpose and definite aims go far in inspiring in the child the love of speech that will lead him to learn to speak by constantly wanting and trying to speak and to understand the speech of others by finding in this his highest and best pleasure. There should be that joy in the work that will lift the child above the ever-recurring difficulties, and in the pleasure of attainment make him forget the obstacles that must be overcome in reaching the goal of good speech and ready speech-reading.

Especially is this perfect response from the child needed in the drill in speech-reading, for though speech-reading is, as Mrs. Bell so aptly expresses it, "a mental art, rather than a mechanical act," yet, before it can become "a mental art" in its truest sense, there must be daily practice in reading elements, words, sentences, and groups of sentences until perfection through practice has been attained.

In this drill the system of language teaching has much to do in helping the child to get away from words and to learn to see a sentence as a whole. During the period devoted to the dictation of sentences or short stories, the child should be able from two or three words understood, or from a general idea of the trend of the sentence or story, to bring to his use his understanding of the laws of sentence building and almost unconsciously fill in the framework with the word or words needed to express the thought. His understanding of the structure of language and of sentence forms makes a connecting link between thought and its visible expression as seen through speech-reading that calls forth the child's mental activities

in the right way and guides him into the independent use of that language which is the material of thought.

In its every aspect the work of the oral class should be made to go through the channel of speech and speech-reading. They should be not only the medium of expression, but the means by which the child's education is received. They should also be the two factors in his life that bring him into closer touch with those about him and that beter prepare him for taking his place in that wider sphere of action which should open up for him on leaving school.

The purpose of the oral teacher not only in the primary class, but throughout the school course, should be speech and speech-reading first, last, and all the time, overlying and underlying every part of the class-room work and turning every thought into its oral expression.

PRIMARY WORK IN ARITHMETIC.

ELIZA KENT, SCHOOL FOR THE DEAF, JACKSONVILLE, ILL.

My story will not be long in the telling; an outline is but the tracery of a pattern, varying in its development with the mental activity of the class, and depending largely upon intelligent guidance and the sympathetic insight and interest of the teacher in charge. Its result may be a narrow, letter-perfect copy of the suggested work, or it may be a broad foundation for continuous growth. With the ultimate in mind, the work of today is always a preparation for that of tomorow, and a realization of coming needs controls each day's plan.

The office of an outline is to make impossible unrelated work and to insure to each school year its legitimate beginning.

In the hurrying commercial life of today, the ability to deal with financial problems is an essential requirement of training in school, mechanical accuracy and logical conclusion being interdependent and equally necessary. I am inclined to agree with the Catholic priest who said, "Give me the first ten years of a child's life, and you may have the others." Impressionable, without conflicting interests to distract his attention, eager for information, and with no false theories to be disproved, one may lay foundations that cannot be undetermined. If *then,* the preparation depending upon memory, observation, and perception is properly made, the intelligence and judgment which come with later years will not be handicapped and

their accomplishments of no value because of imperfect mechanical work.

When I came, after years of work with the normal child, to teach the deaf, their inability to hear seemed an almost insuperable barrier, and their limited vocabulary the important point to be considered in every branch of learning presented to them.

Numbers considered in the abstract are not attractive; and how to make them interesting; how to invest them with life to the deaf child, whose imagination for want of cultivation through nursery rhymes, fairy stories, and intercourse with other children, is inactive, and whose power to image is therefore weak; how to enable him to gain a perception of value and grasp their relation to quantity; to bring him to comprehend the meaning of a mathematical statement; to see the *whole* of a problem; to teach him to form *mental pictures* so real that his deductions from them should be assured; how, in fact, to make the dull delightful, avoid annoying, stultifying evils like copying and counting, and at the same time build up a vocabulary of arithmetical terms and phrases, was the task presented in making an outline for work in primary arithmetic.

First, the memory must assist in acquiring a definite knowledge of the tools to be employed; as a prompt recognition of quantity within prescribed limits, and of the symbols representing it; the order of things as distinguished from their number; a *certainty* in regard to the combinations and differences of all numbers within twenty; the tables of multiplication and division, and those of weights and measures; and, that literary construction which for want of a better term I call *"the language of arithmetic."* The necessity for the systematic teaching and enforced use of certain terms and words is illustrated by the confusion of buy, spend, sell, cost, etc., which results in the "spending of horses" and the "buying of dollars" by the deaf child. In preparation for his work in the shops later, the ability to see *dimensions* and *areas* must also be made as accurate as possible.

To give concrete form to the abstract, and as training in observation and perception, a variety of blocks was provided; in form, cylinders, prisms, spheres, cubes, and disks; the variety allowed for repetition without its being apparent and prevented the conclusion that the points brought out were confined to any particular shape or object. Incidentally, and as a convenience in using them, the pupil learned the names of the blocks; but among the *essentials* acquired were a correct use of the expressions, larger

than, smaller than, less than, more than, equal, equally, same, times, divided among, part of, and many others; also a correct conception of the fractional parts of the unit, and a beginning of the knowledge of ratio in the relations of quantity, and its consequent effect upon values. By the use of beans and splints, number, or "how many," was taught and distinguished from their order, and later the combination of ones into tens and tens into hundreds was illustrated.

To teach the combination and difference in numbers, dominoes, so-called, were made including all combinations within twenty, excepting those requiring the adding of tens and units, and a *certain* knowledge of them required. In this connection, subtraction through addition was learned, and later easily applied to work with larger numbers, and the hope that by this means counting on the fingers would be discontinued, has been, in the A classes at least, largely realized. The dominoes furnish also never-ending "busy work," in which the pupils seem always interested. An efficient leader can usually be found who, given authority not to be questioned, forms a class of the pupils that have finished the designated work. In friendly rivalry they try to be first in recognizing the dominoes shown, thus perfecting their knowledge of them and leaving the teacher free to bring up the laggards. Rubber dies were obtained for making individual dominoes to provide seat work, but the social element and that competition which gives life to trade were thus eliminated, and they have not been popular.

To teach discrimination in dimensions and areas, foot rulers were cut into pieces, one, two, three, four, six, and nine inches long, and when the pupil *knew* twelve and its combinations, these were introduced, the class first recognizing and naming the foot and its parts, and later representing each part at sight by a line drawn on the slate or on paper, testing and correcting the lines until as nearly as might be they *saw* accurately; then they were required to draw lines in any of these lengths without visible help.

Next, surfaces, oblong and square, represented by pieces of pasteboard of definite dimensions, were reproduced in the same way, the first step in finding perimeters and areas being thus established in what was to the children a pastime. At this point the term "dozen" was taught also and its use made familiar.

When he knew sixteen, the pupil's interest in the toothsome dainties he bought by the pound and half pound made easy the learning about weight, especially as it was great fun to determine with

closed eyes the weight of the bag of sand which is the exact equivalent of each denomination and part of a pound.

Next he made the table of liquid measure, assisted by a pail of water and the various tin cups holding the required quantities; and many a new word was added to his vocabulary when he wrote the list of things he or his mother had bought by the pound, quart, etc.

When his multiplication table reached four times eight, because incidentally he finds that thirty-two quarts make a bushel, he has a bushel of sawdust, and with the whole measures constructs the table. It is not wise to introduce here the half-bushel and half-peck.

Now, too, they must learn to read the face of the clock; learn not only the names of the days of the week, but both the names and order of the months and the number of days in each; and when *he* is big enough to pull weeds and *she* to assist in household affairs, both are interested in learning how to find the time between ten-thirty and half-past twelve, or two o'clock and five, because of its relation to *10 cents an hour*. As the pupil advances and the requirements demand it, denominations are added to these tables until they are completed.

In the path of knowledge traveled by my playmates, there were grim specters, long looked forward to and dreaded. After long division had been safely passed, fractions were close upon us, and beyond them came compound numbers. The tales of hardship told by the older ones made us feel that in flight alone was safety to be secured. So, as familiarity breeds contempt, and lest years of understanding should teach the pupil fear, we presented the whole array to him in his infancy. Quantity alone was considered, and whatever symbol or term was needed to represent it, was used as a matter of course, with the result that a pound and 3 ounces, a yard and a half, ¾ of a foot, etc., have no power to make him quail—he uses them as easily as whole numbers.

The pupil first recognizes quantity as a whole to five, selecting any number from one to six from a group at sight; then, by their different combinations to ten, using one hand to separate the whole required from the larger quantity, and both hands when combinations are needed, as, if I say show me 5, he picks up that quantity, but if I ask for 9, he takes 4 and 5, or some of the other combinations making 9.

By means of the disks, spheres, and various other objects, he learns first of one-half and halves, and after an extended acquaintance with them, he takes fourths, one, two, three, and four, and

learns their relation to one and one-half. He makes them; he draws them; he gives them away; he even eats them in the form of cookies and bananas and they become part of his being and enter into his understanding. He must first and for many months, find parts of one only, not of numbers—confusion alone results from haste at this point. Next he finds the ratio of these parts to one, as represented in the blocks. Later the unit block stands for some quantity and he has little difficulty in seeing the relation of the parts. That once definitely established, the relation of the standard unit in any table to the different denominations is easily recognized.

At this point great care is necessary lest the matter given is beyond the comprehension or imagination of the pupil. If confusion arises, explanations should not be given; go back to first principles, and by repetition lead out into the clear light. Blurred mental pictures are apt to be permanent, and explanation often results only in memory work.

I once asked the author of the excellent arithmetics we now use if he would ever explain a problem to a child. He said: "Well, after I was sure he understood it I might, but not before."

While all this is being considered, the construction before referred to must be systematically introduced, beginning in the first year with the one commercial term "bought" and the names and order of numbers to ten. This early attention to the subject was forced upon us by the activity of the child. With acquisition came the desire to represent his possessions, and since he disposed of money in exchange for things, some expression for it was necessary; using the one term for a considerable period, made its confusion with "spend" and "cost" less probable.

In the second year, original number stories are required. When the child has learned that $5 + 3$ is 8, he must tell something, using those numbers and their sum and introducing the terms he has had, as, Frank had 5 apples; he bought 3 apples; then he had 8 apples. Later he writes, "Tom bought 8 apples. He ate 3 of them. Then he had 5 apples left," adding the formula, $3 + 5 = 8$, so preparing the way for the minus sign and subtraction, which, as before stated, he always accomplishes by adding. Almost imperceptibly he slips from the "story" into the "problem," the ending then being, "How many?" or "How much?" Keeping step with his comprehension, the scope of the problem increases, and in succession he tells of combination, separation, and combination and separation, as $6 + 2$, $6 - 2$, $10 - (6 + 2)$, $6 + 2 - 4$, etc.

Doing, without understanding, is well nigh impossible, so when the pupil can make a problem, he can also read intelligently those given him.

A vast amount of very desirable busy work is thus provided with little effort. A few blocks placed in position, or three or four formulas written, with the command, "Write —— number stories or problems," and the class is profitably occupied for any time. Of course the correction of these papers, which should *always* follow, requires time later, but the few minutes needed for slower pupils can thus be obtained with advantage to the better members of the class.

The statement of an arithmetical fact in as many ways as possible is often required, to accustom them to its appearance in different dress, as, one-half of eight is four, 4 is ½ of 8, 8÷2 is 4, 2 times 4 is 8, 4 × 2 is 8.

(One way of stating the "fact" is to *write* the numbers instead of using the figure,—one-half of eight is four.)

The making of change is introduced as early as possible—the tears of a little girl who wished to buy something worth 5 cents, when she had only a dime, showing the need for such knowledge. In this we have followed the customary way of adding to the cost of the purchase, the amount needed to equal the sum given the salesman. This being the preferred way in business, I have accepted it as proof that subtraction through addition is the easier way and more apt to be accurate.

Much attention is given to securing correct mechanical work, frequently requiring certain results within a limited time. One of the tests given to applicants for bank positions is that of copying one hundred or more checks and finding their amount, and a very small per cent are able either to copy or add correctly.

In the final preparatory steps, instead of a detailed analysis, the pupil writes the "meaning" of the problem, giving the "means," as we abbreviate it, for instance: "A boy spent 30 cents, which was ¾ of his money; how much had he left?" The pupil will write: "This means find 1-3 of 30 cents." (If required, detailed work would follow.) Or, "If 15 yards of cloth costs $5, what will 3 yards cost?" means find 1-5 of $5. His ability to do this is the result of his finding proportional ratios in the blocks, and the resulting relation of values. This use of ratio is continued in his higher grade work and simplifies it in many cases.

The mental training secured is perhaps the essential in pursuing the study of arithmetic, and if mechanical accuracy has been established earlier, that part of the work may often be omitted, requiring only the "means."

To give the outline in detail would take too much time and be uninteresting. It has undergone many changes in the three years of its use, and is to be revised this summer, but the results obtained have been very satisfactory. In my desire to have the deaf child reach the normal standard, I have kept him perhaps too much on tiptoe, but there has been a steady growth in *intelligence* and the comprehension of mathematical truths. While careless mistakes still reduce class averages, the *stupid blunder* is becoming agreeably infrequent.

The great danger lies in being led by the interest of the pupils into giving advance steps before the present one is permanently located, which can result only in confusion and consequent loss of time. As I began, any outline is useless, and I think any text-book, unless the teacher is sympathetic and intelligent, can build and broaden, can teach the pupil to adapt the few principles to the manifold application. It is no test of a child's understanding of a subject to require of him what he has seen. To be able to *apply knowledge* to new conditions shows real power—and this can only be obtained by requiring *original* work based upon an interpretation of general laws.

ADDRESS OF THE PRESIDENT.

A. L. E. Crouter, Institution for the Deaf and Dumb, Mt. Airy, Philadelphia.

Members of the American Association to Promote the Teaching of Speech to the Deaf, and Ladies and Gentlemen:

In accordance with custom, I have the privilege and pleasure, this afternoon, of laying before you some account of the operations of the American Association to Promote the Teaching of Speech to the Deaf since its last Summer Meeting; to call your attention to the remarkable growth of the work that called it into existence; to point out certain elements of weakness and of strength that have attended that growth; and, finally, to offer some suggestions whereby our usefulness in the cause we have in hand may be increased and extended.

As many of you no doubt recall, the last meeting of the Association was held seven years ago in Clarke School, Northampton, Mass. It was a meeting in every way admirably conducted by my very distinguished predecessor in office, Dr. Alexander Graham Bell, who, as founder and friend and benefactor, has done so much to promote the cause of teaching speech to the deaf in our own country and in foreign lands. His enforced absence today is a source of regret, amounting to personal loss, to every member present. For various reasons, no regular meeting of this character has been held since the Northampton meeting, but the work of the Association has not been allowed to suffer. Its Board of Directors, through various channels and agencies, have lost no opportunity to advance the interests of the cause it seeks to uphold. It has published seven volumes (the eighth will be completed in December next) of the ASSOCIATION REVIEW, a magazine ably conducted by the General Secretary, Mr. F. W. Booth, supported by an exceedingly capable staff of writers. It has aided schools in their efforts to teach speech and speech-reading. It has encouraged the holding of summer schools for the training of teachers of articulation. It has maintained a bureau of information through which many schools have been enabled to secure teachers, and many teachers to obtain positions of a public and private character. Its General Secretary has visited a large number of institutions and schools, usually by special invitation, and given aid and encouragement as conditions seemed to require, has attended all conventions of instructors, conferences of superintendents and principals, and all meetings of the Department of Special Education for Defective Classes of the National Educational Association, making full and complete report in each instance to the Board of Directors. And, lastly, through the munificent assistance of its founder, Dr. Bell, the Association has recently been enabled to perpetuate the memory of his distinguished father, the late Dr. Alexander Melville Bell, the most original and profound investigator in the science of phonetics the world has ever known, and whose teachings constitute the basis of the best achievement in speech work for the deaf in this country, by establishing a complete normal department in Clarke School, Northampton, for the special training of teachers of speech and speech-reading, and in the art of teaching deaf children by oral methods. Of this step the REVIEW, in the April, 1906, number, well says:

"It is difficult, impossible indeed, to foresee the full effect of this action of the Association. That the effect will be profound and

far-reaching will scarcely be doubted, for it is enlargement of work that possesses within itself the largest potentialities for good, and that, from its inception to the present time, has been far too restricted to meet the demands made upon it. During the past fourteen years Clarke School has, in response to a request to do so, made by the Association at its Second Summer Meeting, maintained a small Normal Class open to outside students. This class has been necessarily limited, containing usually four, rarely five, members. It is now proposed to increase the class to eight or ten, this to be done at the opening of the coming term in September, with it in view, however, to still further increase the number to eighteen or twenty whenever the school may be able to make room for so many, which it is hoped may soon be possible."

I am permitted to add that necessary preparations have been made to open the department next month, and that a large number of applications for admission to the first class have already been received. It is most gratifying to be able to state at this time and in this presence that this splendid work, having for its immediate purpose the uplifting of a large and most deserving class of children, is about to be undertaken and will be continued, through income derived from funds donated by the founder of this Association, augmented by individual contributions of the students under training, and not through governmental assistance, whether state or national. The undertaking is in every way a most laudable one. I bespeak for it the sympathy and active and generous support of all people interested in humanitarian projects. It is also proper to state that as a part of this splendid donation of some $75,000, was presented a fine property, just opposite the Volta Bureau in Washington, D. C., in which, as soon as suitably fitted up, the main offices of the Association will be permanently established. This, it is hoped, will be accomplished early the coming month, when the office of the REVIEW, and of the General Secretary and Treasurer, will be transferred to its new quarters.

But I have not told you of all the benefactions of Dr. Bell to the Association during the past seven years. In addition to the endowment of $100,000 ($25,000 when the Association was founded and $75,000 last spring), he has annually paid into its treasury $1,500 to enable it to carry forward its great work. These payments he will continue for three years longer, when, it is confidently believed, the income from its endowment funds, together with the membership dues and income derived from various publications and other sources,

will be sufficient to enable it to carry forward its work without further assistance at his hands.

What a monument has this noble scientist and philanthropist thus reared to his memory! Greater than his fame as the inventor of that wonderful piece of mechanism that bears the human voice through space with the speed of light, and more enduring than his renown as the founder of the Volta Bureau for the Increase and Diffusion of Knowledge Relating to the Deaf, his name will be revered and remembered for all time as the friend and benefactor who taught deaf children to speak.

It is thus seen that, although no summer meetings, no gatherings of this character have been held for several years past, the Association, through its Board of Directors, has not been idle or careless of its opportunities to prosecute its special work. On the contrary, stronger, better organized, and better equipped than at any time in its history, it has endeavored to fulfill its special mission, and, with your assistance and encouragement, today stands prepared to push forward the splendid work it has done so much to foster during the past fifteen years.

In 1886, just twenty years ago, at the justly celebrated Convention of American Instructors of the Deaf held at Berkeley, California, the following highly important resolution was adopted:

Resolved, That earnest and persistent endeavor should be made in every school for the deaf to teach every pupil to speak and read from the lips by Articulation teachers who are trained for the work, provided that pupils having sufficient hearing be taught aurally, and that such efforts should be abandoned only when it is plainly evident that the measure of success attained does not justify the necessary amount of labor.

And at the almost equally celebrated Conference of Superintendents and Principals held in 1892, fourteen years ago, in Colorado, the following resolution was adopted without a dissenting voice:

Resolved, That it is the sense of this Conference that in all schools for the deaf pupils who are able to articulate fluently and intelligibly should recite orally in their classes, and be encouraged to use their vocal organs on every possible occasion.

These two resolutions by their adoption committed all American Schools for the Deaf to the policy of teaching speech and lip-reading in an earnest and persistent manner to all pupils capable of being so instructed; they further committed them to the policy of providing

aural instruction for pupils of sufficient hearing to enable them to profit thereby, and to the policy of providing oral recitations in oral classes for all pupils able to articulate fluently and intelligibly, and of encouraging them to use their vocal organs on every possible occasion. These resolutions mean this, or they mean nothing. They mean that honest, earnest, just, and persistent effort shall be made to teach every deaf child to speak and to read the lips on all possible occasions, and that this effort shall only be abandoned when the measure of success attained does not justify its further continuance. This is a broad and liberal platform, one upon which all friends of speech and speech-reading may stand. And it is somewhat remarkable that the degree of persistance with which these resolutions are being enforced in our schools today indicates, with almost unfailing accuracy, the measure of success attending our efforts to teach deaf children to speak and to read the lips in our American schools. The records clearly show that in schools where these resolutions are earnestly and persistently, and I may add wisely, enforced, the most satisfactory results are attained, and on the other hand, that in schools where the effort to enforce them is unskilfully made, and feebly and faithlessly persisted in, dissatisfaction, discouragement, and failure are plainly evident as the result of the attempt. In the former, in addition to the speech and lip-reading acquired, we find the mental development, the moral and religious training, and higher education of pupils progressing along lines in every way encouraging and satisfactory; in the latter, we can but note the inevitable failure that invariably attends efforts unwisely, unskilfully, and unsympathetically directed.

As is well known, this Association was founded in 1890, in consonance with the spirit of the California Resolution, to the end that no deaf child in America might be suffered to grow up "deaf and dumb," or "mute," without earnest and persistent effort being made to teach him to speak and read the lips. That was the great central and dominant thought that led to its organization, and careful and persistent effort has ever been made to conform its work to that end. Whatever may have been the personal opinions and sympathies of its members, and undoubtedly they have been many and varied, as regards the best methods of securing mental development in deaf children, its great work has been the creating and upbuilding and upholding of public sympathy in favor of teaching speech and lip-reading, whenever possible, in all schools and institutions for the instruction of deaf children. And in this, its chosen field of effort, it has been

markedly successful. In 1892, two years after the organization of the Association, the percentage of pupils taught speech in all our schools was 49.4; in 1893 it was 54 per cent; in 1894, 54.4; in 1895, 54.9; in 1896, 54.9; in 1897, 56.4; in 1898, 57.4; in 1899, 61.4. In the year 1900, 64 per cent; in 1901, 64.7; in 1902, 64.7; in 1903, 67.2; in 1904, 67.3; in 1905, 69.1; 1906, Mar. 31, 70 per cent. In 1892, the number of pupils taught speech was 3924, the number not taught speech was 4016; in 1906, the total number taught speech was 8145, the number not taught speech was 3667. Again in 1892, the number taught wholly by oral or speech methods was 1581; in 1906, the number had risen to 4274. This increase in the number of pupils taught speech and taught by speech is most gratifying, and indicates the marked attention the subject is receiving throughout the country wherever a school for deaf children is maintained. The increase in the number of speech teachers indicates perhaps better than anything else the marked strides that have been made. In 1890 the number was 213, or 33.2 per cent of the whole number. Five years later, 1895, the number was 397 or 47.5 per cent; five years later, 1900, the number was 588 or 58.2 per cent, while in 1905 the number had risen to 749 or 64.6 per cent, considerably more than half the total number employed, and an increase of more than two hundred per cent over the number employed in 1890. The most marked increase in speech work occurred in what are known as Combined System Schools, in which all methods are recognized and practiced, and in the large number of Day Schools that have been established chiefly in middle western states and in California. The increase in oral schools followed usual normal conditions of growth, and are not included. I mention a few of the more representative schools in which this change has taken place, comparing conditions of 1891 with those of the present year, as shown in the American Annals of the Deaf, January numbers, and giving the number of teachers employed and the number of pupils taught. (See table, p. 116.)

This list indicates, in a most graphic and surprising way, the great increase that has been made in speech-teaching in the majority of these schools during the past fifteen years, for it is not to be supposed that these teachers have been appointed for any other cause than that of meeting the growing demand for speech instruction. The greatest proportionate increases have been made in Texas, 1 to 20; Indiana, 1 to 14; North Carolina, 1 to 13; Michigan, 1 to 11; Ohio, 1 to 10; Western Pennsylvania and Colorado, 1 to 9 each; Kansas, 1 to 8; and so on down the list, all showing gain excepting

California, where the number of teachers of speech in 1906 remains the same, *two,* as it was fifteen years ago, the only difference shown, being that in 1891, 68 pupils were taught speech, whereas in 1906, 112 pupils were taught speech.

Name of School	Number of Pupils Taught Articulation		Number of Articulation Teachers	
	1891	1906	1891	1906
Kendall School and Gallaudet College.	97	87	12	19
American Asylum	121	120	4	10
New York Institution	335	450	8	26
Pennsylvania Institution	130	478	14	56
Kentucky School	81	154	2	12
Ohio Institution	125	268	2	20
Virginia Institution	25	61	1	5
Indiana Institution	68	183	1	14
Alabama School	22	84	2	7
Tennessee School	110	51	1	4
North Carolina School	12	124	1	13
Illinois School	275	400	8	39
Arkansas Institute	34	77	1	7
Georgia School	No return.	97	1	5
South Carolina Institution	26	39	2	5
Missouri School	80	98	2	8
Louisiana Institute	29	84	1	4
Wisconsin School	45	120	3	13
Maryland School	54	65	2	5
Michigan School	65	184	2	22
Mississippi Institution	15	0	1	4
Iowa School	25	114	2	9
Texas Asylum	50	267	1	20
Kansas School	54	102	1	8
Minnesota School	100	90	2	9
Colorado School	50	82	1	9
Western Pennsylvania Institution	50	184	2	18
Western New York Institution	167	184	5	7
California Institution	68	112	2	2
Sundry Day Schools	285	948	33	114
Total	2598	5307	120	494

With this exception, there has been a gratifying increase not only in the number of pupils taught, but in the number of teachers employed. All this means smaller classes, more work, and better work. Beginning with the American School at Hartford, we find that whereas 4 teachers sufficed to teach speech to 121 pupils in 1891, 10 are required to do the same work for about the same number in 1906; that in Texas, while one teacher taught speech to 50

pupils in 1891, twenty are deemed necessary to instruct 267 in 1906; that while one teacher attempted to teach speech to 68 pupils in Indiana in 1891, fourteen are employed to teach 183 in 1906; that in Michigan two were required to instruct 65 pupils in 1891, but twenty-two to teach 184 in 1906; and so one down the list. In 1891, there were, in round numbers, 2600 pupils in these schools taught speech by 120 teachers, an average of 21 pupils—a number absurdly high—to each teacher; in 1906 there were 5300 pupils taught by 494 teachers, an average of 10.7 to each. These figures are in nowise visionary or fanciful. They are drawn from the latest and most reliable sources—the American Annals of the Deaf and the ASSOCIATION REVIEW—and indicate more strongly than words can paint the tremendous changes that are gradually and surely taking place in the methods of teaching in our American schools. They mean, if they mean anything, that, in regard to speech-teaching, better methods are being pursued in nearly all our schools and more work is being accomplished than was attempted or thought necessary fifteen years ago. This change tells its own story; it constitutes a most healthful and encouraging condition of growth.

But this is not all. Agreeably to the action taken at the Colorado Conference, in a great many of our schools, the most progressive ones, in addition to articulation teaching as commonly practiced, oral classes, and oral departments composed of orally taught pupils only, have been established in recent years. This I regard as a most important and significant step—a step which, if patiently and persistently persevered in, must lead to far-reaching results in the future of our schools. I am sure I speak quite within bounds when I say that combined system schools that now maintain oral classes and oral departments, and have experienced the great benefits which have followed their introduction, could hardly be induced to return to the old style of articulation teaching as practiced twenty or twenty-five years ago.

Articulation teaching as a sort of ornamental branch, not highly ornamental at that, is a very different thing from teaching speech by and through speech and as a means of mental development and mental culture. The former is but the dim shadow of the end sought for, while in the latter is found the full fruition of the teacher's aims and efforts, the realization of the pupil's desires, the fulfillment of the parents' hopes and prayers.

The next step to be taken by Combined Schools should be in

the direction of providing a separate department in a separate building for all orally taught pupils, thus giving them the great advantages of separate supervision, separate classification, separate instruction, and a real opportunity to acquire practical speech and lip-reading. The attempt to provide separate classification and instruction in the same building too often results in harassing antagonisms and accusing disappointments. Better give complete separation, even at the risk of slightly increased cost of maintenance, than attempt to maintain a house—a school family—divided against itself.

There are but two methods of teaching the deaf, the oral, or speech method, and the manual, or sign method. All methods that are not oral in principle and in practice are manual. The attempt to combine these two methods in the instruction of the same pupil, under what is styled the Combined System, is, in my opinion, for the production of the best speech results, a demonstrated failure; they do not, will not, cannot combine. Unless debarred by physical or mental defect, every deaf child should be given full opportunity to profit by oral instruction from the beginning to the end of the course to the exclusion of any and all sign-teaching as such. Spasmodic attempts to develop speech and the speech habit by half or three-quarter hour vocal gymnastics must, with some rare exceptions, in the nature of things end in disastrous failure. If the speech habit would be established in a deaf child, speech communication must be insisted on at all times and in all places by officers, teachers, and pupils, and all sign communication discouraged and, as far as possible, prohibited. There should be no half-way measures employed; no compromise on the specious plea of class happiness, or class intercourse, or class association, should be tolerated, if the deaf child is to become proficient in speech and lip-reading, making it a potential factor in after life in communicating his ideas with his hearing fellows. I have been a witness of almost every conceivable form of deaf-mute instruction and stand ready to give as my mature judgment, founded on almost forty years of experience, that if a deaf child is to acquire the habit of speech and speech-reading in such manner as to make speech communication with the hearing world fluent and exact, relying upon it at all times for the free and full expression of his own ideas and the comprehension of the ideas of those about him, there can be no half-way methods pursued in his instruction, no compromise of any sort as to the use of signs; in other words, his instruction must be by oral methods alone, and by no other. This practical suggestion of separate instruction I leave

to the judgment and practical experience of heads of schools. Upon them must rest the responsibility of making the wisest and best provision for the advancement of their pupils, whatever method of instruction may be adopted and pursued. That the duty will be fully and conscientiously met is not to be doubted.

One of the most pressing needs of American Schools, whether deaf or hearing, of the present time, a need that is receiving careful consideration at the hands of our best educators, is a new classification of pupils for purposes of care and instruction. Up to this time, but one basis of classification, that of mental development, has been recognized. All classes of children are received into one and the same school, regardless of physical conditions or previous advantages. In our special schools, the totally deaf, the semi-deaf, the mute, the semi-mute, and, in too many instances, the feeble-minded, are admitted to the same school and maintained there regardless of consequences. It does not infrequently happen that children partially deaf or recently become deaf, with speech but slightly affected, are placed in schools where they are, perforce, suffered to mingle with children wholly unlike themselves. This is a great wrong, an unnecessary wrong, a wrong that some day must be righted. Our schools, of whatever character, should be so systematized that proper segregation and classification on a physical as well as mental basis may be easily and readily carried into effect. The semi-deaf and the semi-mute should constitute one class, and be maintained and instructed according to mental advancement by themselves; the congenitally deaf should form another distinct class, to be classified and graded, and instructed by themselves; and the feeble-minded, and those of very low mentality, whether born deaf, or semi-mute, or semi-deaf, should constitute quite another class, and be maintained and instructed in schools quite apart from the others. This classification is observed with excellent results in some parts of Europe, and it is greatly to be hoped the day is not far distant when it will be introduced into the schools of this country.

But with the wisest and most complete classification of pupils and the most skillful adaptation of methods, to attain the highest success there remain two or three essential conditions to be considered. First: Well trained teachers. In a meeting of specialists such as this, this condition of complete success will hardly be questioned. But too often it has been a question if not ignored at least neglected. This, in part at least, has been owing to a feeling that almost any kind of teaching was good enough for deaf children, but

more largely to the fact that it has not been possible to maintain schools in which the necessary training might be secured. True, there have been small attempts, in various parts of the country, of a somewhat private character, to provide needed instruction and training, but aside from the training class at Northampton, the normal classes at Chicago and Milwaukee, and the normal department at Gallaudet College in Washington, there has never been any permanent systematic effort made in this direction until quite recently. The normal department of the Chicago Teachers' College, which is now in successful operation, is carrying forward the work of training teachers, begun in the McCowen school, and the department at Northampton, begun in 1892, is to be enlarged this fall, under Miss Yale's direction, to accommodate ten students, the number to be increased to twenty as facilities permit. These two departments, and the department at Milwaukee, unlike that in Washington, will give training in speech and in speech methods only, the study of signs and manual methods of teaching not forming any part of their curricula.

With these four Normal Departments in successful operation, there will soon be a supply of highly educated and carefully trained teachers to draw upon in filling vacancies in our various schools. Parents desirous of providing scientific instruction for the private training of their children will doubtless hasten to avail themselves of the advantages thus offered. All this must, in the near future, prove a decided uplift in the instruction of our deaf children by and through speech and speech methods.

But with highly trained teachers, there must also be scientific supervision. A trained teacher does not necessarily imply successful work. With the normally trained teacher, there must be experienced and highly trained supervision if we would seek to command the highest results in the class room. To omit this supervision is simply to invite failure. The trained teacher is only a link in the long chain of successful class work.

To these two conditions of trained teachers and experienced supervision, I would add a third of equal, in some respects of greater, importance: Active, sympathetic support on the part of official superiors. With all these conditions of thorough classification and grading, of well trained teachers, of expert supervision, and active, sympathetic support well supplied, the work of our schools will receive an impetus that will carry them far beyond anything hitherto dreamed of. For, however successful and gratifying results have been in the past, I believe the future will witness still greater. May

we not regard the progress of the past as simply the forerunner of still greater achievement in the future?

Let me now briefly call your attention to some special present-day features of speech-teaching in this country. First: Private Teaching. There seems to be a very decided movement in favor of private teaching by speech methods in families able to meet the expense, and in a great many instances, probably the majority, with very favorable results. There have come to my knowledge a great many such cases during the past two or three years, and no doubt a great many more are known to you. The reasons assigned by parents for pursuing such a course are superior speech and lip-reading, better mental development along more natural lines, freedom from institutional life and all that it involves, and the cultivation of stronger home ties in consequence of uninterrupted family associations. In some of these assigned reasons there is food for reflection. No doubt a young deaf child, enjoying the constant association and instruction of a skillful teacher and knowing no method of communication except by and through speech and lip-reading, becomes very expert in lip-reading and very fluent and self-reliant in the use of his vocal organs. No doubt, too, institutional life when it extends through several years, from ten to fifteen and even longer, does tend to weaken family ties and to form very strong attachments for school and class associations, sometimes to the extent of rendering after home life burdensome and unhappy. Nor is it to be denied, there are certain habits and tendencies, not altogether of a desirable or happy character, engendered by institutional life, which parents find it very difficult to eradicate upon the return of their children to the family circle. These disadvantages, to a certain extent, are inherent in any form of institutional or school life, and are therefore unavoidable under the most favorable conditions. But, on the other hand, large schools and institutions possess certain advantages which private instruction cannot provide. As a rule, they are better equipped, have larger apparatus, more efficient teachers, and being better regulated, without resorting to severity, enforce better discipline and more studious habits. To these certain advantages must be added the important elements, in the education of children, of emulation, of ambition, and the mental friction that is aroused by the association of children in the performance of school and class work. All these important elements of school and institutional life are largely wanting in private instruction, whatever other advantages, here freely admitted, it may possess.

Second: Aural Training. Dr. Bell, in his exhaustive tabulation of the Census of 1900 relating to the Blind and Deaf, states, that of the total population of the country at that time, about 75,000,000, not including outlying possessions, 89,287 were returned as being deaf, and that of these 37,426 were returned as being totally deaf, and 51,861, over fifty-eight per cent, were returned as being partially deaf. The total population at this time is probably 90,000,000, of which, if the percentage of deafness remains the same as in 1900, there must be hard on to 100,000 deaf people in this country, of whom 42,000 are totally deaf and 58,000 partially deaf. Of this totally-deaf population there are under instruction, at the present time, in the various schools of the country, about 12,000 pupils, twelve per cent of the whole number, a number far too small, and of these 12,000 there must be at least from fifteen to eighteen hundred, fifteen per cent, possessing sufficient hearing to be of practical value in connection with their instruction in speech. Now just how far this hearing is utilized in our special schools is a question worthy of careful attention, and I bring it before you at this time, inviting your best thought and consideration. There can be no doubt that the possession of any considerable powers of hearing is a matter of much importance to a deaf child in its acquisition of speech. If properly utilized, it gives quality and tone to speech otherwise impossible. All this is quite aside from any attempt to increase the power or ability to hear; it is more in the line of teaching the child to use the power it already possesses in the cultivation of its speech. And I think that perhaps too little attention is given in most of our schools to this subject. But how shall this hearing power be best utilized? What instruments are best adapted to the work, and what are the best practical lines of procedure by the trained teacher of speech? I am aware that great differences of opinion upon this point exist. Some favor the use of the unaided voice, leaving nature to do the rest. Some favor the use of powerful speaking tubes or trumpets and some favor the use of instruments with electrical attachments, greatly increasing the tensity of sound vibrations as in the telephone, the aurophone, the acousticon, and other instruments of that character. I trust our Association may take up this subject and give it the consideration it deserves. The address we are to have on this subject during our meeting, by one of Pittsburg's most gifted specialists, Dr. Chevalier Jackson, will, no doubt, prove very helpful in guiding us to safe conclusions.

Third: Age of School Admission. Another matter of present-day interest is the age at which speech-teaching and lip-reading, and the mental development that should accompany them, may most wisely and profitably be begun in a deaf child. There are some educators who feel that this work cannot be commenced too soon, that a deaf child should begin to acquire speech habits as soon as a hearing child, and to this end there have been established infant schools or homes for the instruction of young deaf children before they are of school age. The first of these was the McCowen Oral School, of Chicago, founded in 1883; the next was the Sarah Fuller Home, of Boston, founded in 1888; the third was the Albany Home School, Albany, New York, founded in 1889, and the fourth, the Home School for Young Deaf Children at Bala, Philadelphia, founded in 1892. In these schools children are admitted at a very early age, some of them as young as two years, and their instruction is conducted along speech lines, quite to the exclusion of the language of signs. The age of admission in some of our larger and older schools has been greatly lowered in recent years, but none, so far as I am informed, have gone so far as to admit at so early an age as these Infant Schools. Among the advantages claimed for this early training are smoother and more intelligible speech, the formation of more permanent speech habits, and the acquisition of quicker, more exact, and more reliable powers of lip-reading. One goes so far as to claim that deaf children thus early taught acquire such natural speech and such readiness and exactness in lip-reading as to be able, after a suitable preparatory course of six years, to take their places in our regular public schools, and therein pursue with the highest success the usual course of study pursued by hearing pupils. I have no exact information to place before you of the results of the work of these schools at this time. Perhaps they have not been in operation sufficiently long to warrant safe conclusions, but if the claims advanced can be verified by expert examination, the method should be adopted by all our schools at as early a date as practicable, and deaf children placed under instruction at a much earlier age than is now the case. I would suggest that the question be taken up by a special committee of the Association, thoroughly investigated, and report made at our next regular meeting.

Fourth: The Day School Movement. The remarkable extension of the Day School system of instructing deaf children may also be regarded as one of the present-day features of Speech-Teach-

ing. Whatever the advantages of this system may be when compared with those of boarding schools, it is not to be denied they are gaining in strength and popularity at a very rapid rate in many parts of the country, especially in Wisconsin, Michigan, Illinois, California, and some other states. According to our latest information upon the subject, there are now no less than 950 pupils, with 115 teachers, attending these schools, with every prospect of a large increase in the near future. The rapid growth of this movement is undoubtedly owing to the following, among other reasons:

1. They are Speech Schools. This popularizes them at once with parents and the general public, and secures for them a standing and a permanency that they might not otherwise enjoy. They also form part of the public school system, which emphasizes their work and disassociates them in the public mind from all special or institutional or charitable instruction.

2. They are Home Schools. Children attending them remain at their homes, going back and forth to the daily sessions as do hearing children attending hearing schools. This is likewise a great source of strength to the system. Parents, quite naturally, prefer keeping their children at home during the earlier years of their school life, particularly so since they have every opportunity for speech communication at home and at school, and are quite free from the objections so frequently urged against boarding schools of whatever character.

3. The system carries the school to the children instead of taking the children away from their homes to the school. This undoubtedly has the effect of increasing school attendance and of reaching a large number of children who would otherwise never be placed under instruction of any kind. Indeed, statistics upon the subject tend to prove that in states where Day Schools are numerous, school attendance is much larger in proportion to the whole population than in states where the system has not yet been introduced.

4. They are economical. Day Schools are less expensive to maintain than boarding schools. This, of course, commends them to parents and to state authorities.

These and other reasons that might be given commend this method of educating deaf children to the general public in a growing degree. The discipline maintained, the intellectual work accomplished, the speech and lip-reading acquired by children attending them are said, in most instances, to be of a high order.

My personal experience in connection with this system as affecting educational results has not been favorable, but their general permanency, their stated efficiency, and their constantly growing popularity require that just mention be made at this time of their work as an active, efficient agency in the promotion of Speech-Teaching in various parts of the country.

I have endeavored during the course of this, I fear somewhat desultory, address to place before you the work the Association has accomplished during its short life, especially the last seven years; to point out the remarkable growth of speech-teaching in this country during that time, and the part the Association has taken in promoting it, and to call your attention to some special features of speech-teaching now taking root in various sections. The record is complete.. Speech-teaching, and teaching by speech, is become an assured fact in the great majority of American schools. The work has been accomplished within the memory of many present. That forty years should have sufficed to effect the great changes wrought is as remarkable as it is gratifying. In this great achievement there is much reason for gratitude and rejoicing. We all share it. But to her who forty years ago, in a small village in Massachusetts, began this great movement under conditions as humble as unpromising, must this occasion appeal most profoundly. Her kindly presence here today comes as a benison to every member. As she looks back over intervening years, recalling the early struggles of the movement, its trials with unbelieving friends and outspoken foes, its struggles in legislative halls, its victories in the class room, and its present triumphs as seen and felt and appreciated in thousands of homes, her womanly heart must swell with gratitude and praise. Honored and beloved throughout this broad land, this great educator, this apostle of speech-teaching, will ever live in all our hearts, and the tongues of numberless deaf shall speak her praise.

The past is secure, the future full of hope. When we reflect that this movement began but two score years ago with few to lend it a helping hand; that year by year it has grown in popular favor, commanding success by the spirit of its advocates and the genius of its methods; that today fully seventy per cent of the pupils under instruction in our American Schools are enjoying its benefits, and more than one-half of the teachers employed are teachers of, or teach by, speech; that on every hand efforts are making to perfect, unify, and increase its benefits, may we not feel justified in looking forward to more brilliant results in the future, to the hastening of

that day when every deaf child, not incapacitated by physical or mental defect, shall no longer be classed as "deaf and dumb," or "mute," but shall be taught to speak and to read the lips? May this Association, founded to promote this beneficent work, ever be found earnestly and persistently laboring to advance so just and so humane a cause.

MR. N. F. WALKER: Following the address of the President of the Association, I think it is proper that the Secretary of the Association be instructed to send a message to Dr. Graham Bell, expressing the regrets of this Association on account of his absence, and also expressing the hope of his early recovery. I make that motion.

The foregoing motion, being duly seconded, was carried, and the following telegram was sent:

Edgewood Park, Pa.,
Aug. 27, 1906.

Dr. Alexander Graham Bell,
Beinn Bhreagh, near Baddeck, Nova Scotia:

Summer Meeting an assured success. Probable attendance more than two hundred. Standing vote of Association expressed affectionate loyalty to its founder and sincere regret for his enforced absence.

A. L. E. Crouter,
President.

On motion, telegrams were also ordered sent, expressing the regrets of the Meeting for their absence, to Mrs. Gardiner Greene Hubbard, Miss Sarah Fuller, Dr. Job Williams, and Hon. Robert C. Spencer.

MR. JOHNSON: There is a little matter I wish to speak of, that we are all interested in. We have heard a great deal this morning about speech and speech-reading and about various other phases of the work; but there is one thing we have not heard about, and I have been requested to speak of that. There is a man up here at Binghamton, New York, by the name of Jones, who handles scales of some sort. You have probably seen his advertisements in the paper all over the country and every one states that "Jones, he pays the freight." It is in connection with this "freight question" that I want to speak this morning. This Association forms a great clearing house for the interchange of ideas and the acquisition of

knowledge, which all of us are very glad and willing to attend and are sorry that we have not been able to attend more often than we have during the last few years. This Association is formed for the benefit of all interested in giving speech to the deaf and must have the wherewithal to pay its actual running expenses which includes the publication of the ASSOCIATION REVIEW. Every teacher here who is not an active member should become an active member of this Association and pay his or her dues as an active member. Because of this Association's organization, we have been permitted to come to this institution here, getting reduced rates for board, etc.; we have gotten reduced rates over the railroads coming here and it is all because of the organization of the Association. The Association is under expense, and therefore it is obligatory for each and every one of us to contribute our help towards sustaining the operations of the Association. I call attention to this in rather a pointed sort of way because I feel that it is a business matter and business is always to the point. I want to announce that immediately after luncheon the Secretary-Treasurer of this Association, Mr. Booth, will be in the library; and I hope all of you who have not already attended to this matter will meet Mr. Booth there and make the necessary arrangements.

There is another matter. I believe that every oral teacher, whether he or she attends these summer meetings or not, should become an Active Member of the American Association, willing to contribute, willing to help for the common good, because, whether we attend or not, we reap the good that is bound to result; and I further believe that the superintendent of every institution in the country should exact of all his Oral teachers that they become Active, *bona fide* members of the Association and contribute their mite towards its maintenance and take the REVIEW. Of course, you understand that in paying dues, $2 a year, you get the REVIEW without cost, and you get information along this line of work that you could not get elsewhere for the payment of a great many times the two dollars. I want to insist on this "congregation" helping out as much as it can; and now is the time, and the accepted place is down in the library immediately after luncheon. Please attend!

DEFECTIVE VISION IN SCHOOL CHILDREN.

G. E. CURRY, M. D., PITTSBURG, PA.

Recently, a native ruler of one of the principal states of India, under British control, has said that the best government is that which contributes the most to the happiness of the greatest number of people, and this sentiment coming from a Hindu potentate, though dating from the days of the oldest philosophers, might well in these days of governmental misrule be adopted by us all as a guiding principal. It furnishes an excellent motive both to the state and the individual. Recognizing the humanity of this thought, some of our states, as Massachusetts and Connecticut, and many of our municipalities, have taken steps to ameliorate the physical defects found among the children over whom they have any jurisdiction. Education should acknowledge and in fact may be said to have acknowledged the importance of such steps.

Undoubtedly, many of the most distressing diseases incident to human existence have their origin during the school life of the one afflicted; hence, all possible preventive measures should be employed. In fact, it may truly be claimed that in the past half century preventive medicine has made greater strides than curative. We see this in our improved sanitation, hygiene, quarantine, and other praiseworthy tendencies towards the mitigation of disease.

As a result of the vigorous requirements of education in this age, perhaps no one organ is so overtaxed as the eye. Doubtless, you have often heard the eye compared to a camera, and while it presents certain points of resemblance, yet the camera is purely a physical apparatus, while in no sense can the eye be regarded as an optical machine. It is a part of a very complex physical body and is not independent from the functions exercised by other organs comprising that body and only as a part of this physical total can its anatomy, physiology, as well as its abnormalities and defects, be best studied and treated.

In pursuance of this idea, we may propound the following questions:

(1.) Is human eyesight deteriorating?

(2.) If so, to what may it be attributed?

(3.) Are the eyes of school children specially subject to this deterioration?

(4.) Do we possess a means of prevention and a remedy?

To the first and third of these queries, we can at once respond in the affirmative. Of the causes of this deterioration, ophthalmic science undertakes an explanation; and as to its prevention and cure, it promises amelioration.

Statistics show that mental development is largely at the expense and loss of the physical. Uneducated races show much better physical conditions than those where the desire for knowledge and advancement is insatiable. This is particularly marked so far as ocular defects are concerned. In fact, it can be said that intellectual advancement and ocular degeneration are inseparable. Data compiled by Dr. Frank Allport, of Chicago, a pioneer advocate of the systemic examination of school children's eyes under state or municipal authority, from which I freely quote, indicate that pure Mexicans rarely show refractive errors, and the few deviations from the normal that do exist are found in the mixed races where there has been some education among the ancestry. Fox, in his examinations of the eyes of the Indian pupils at Carlisle, found only an average of 2 per cent of myopia or near-sightedness, and Callan's test of the eyes of negro children in New York schools showed about 2½ per cent of myopia. In striking contrast to these figures, we may present the reports of those who have examined the eyes of the school children in many American cities. These show 25 per cent of myopia; while, if we look farther, at the statistics of the Germans, who are known as a near-sighted race, we find about 70 per cent of the entire population affected by this abnormal condition. It is also claimed that an even larger percentage of myopia is found among the Jewish race. This, I do not think, can be substantiated except that they engage mainly in sedentary occupations in contrast to the open air employment of other races.

Frequently we are confronted with the statement, "The farther south the more normal the eye." This can be accounted for by climatic conditions which are conceded to promote indolence and mental inactivity. We find an almost invariable increase of myopia or near-sightedness and a decline of hyperopia or far-sightedness as educational opportunities are taken advantage of. That the myopic eye is very frequently capable of performing great labor at close range is clearly demonstrated; while the hypermetropic and the astigmatic eyes can do the distant work with comparative ease and that close by with difficulty.

We all, I dare say, can recall many instances of the child believed to be dull, idle and listless, a trial both at home and at school,

suddenly transformed into a bright, energetic and interesting pupil, owing to somebody having become cognizant that a pair of carefully fitted spectacles might be the solution of the trouble. This is so common an occurrence that the method of relief suggests itself, that is, a systemic examination of the eyes of all school children at proper intervals. It does not seem advisable that this matter be left to the discretion of the parents, many of whom are not awake to the conditions, nor should the matter be referred to any optician whose viewpoint is oftentimes the commercial one of selling a pair of glasses rather than overcoming the ocular defect. One mode of proceeding is to have a capable physician appointed by the proper authorities to examine the eyes of each child when admitted to school and at regular periods during the school course. This would involve a salary and, unfortunately, political favoritism would often enter into the appointments. Another method might be adopted, requiring each pupil to present a certificate from an oculist of recognized standing, stating the condition of the eyes. The question of expense would perhaps cause this to be opposed; hence, those who have most carefully considered this subject have concluded that, at present, all that is practical is to secure physicians of established reputation to deliver addresses to principals and teachers of schools, giving plain instructions, thus enabling them to test the vision, to note redness or local inflammations of the eyelids, and carefully recording the same, and reporting any that do not attain a necessary standard to their parents with a recommendation that a competent oculist be consulted.

Light, air, and furnishings all need the careful attention of those in charge. Light should come from the sky and as high above the pupil as the ceiling will permit. If at times artificial light must be resorted to, a sufficient number of electric lamps, properly shaded and arranged with regard to the desks, are to be recommended, not only on account of the whiteness of the light, but also because the air is not vitiated by their use. Proper seats are also an item of importance; those conducive to an upright position with comfortable backs should be selected; but the uniformity we rarely fail to see in the school room is not always a desirable feature; for the reason that, in the same grade, we have such diversity in size among the pupils. The placing of blackboards also requires attention. Care should be taken that no strain of the eye occurs in order to see. Some oculists insist, as a substitute for the present blackboard, a white surface be employed, on which black crayon is used. This

would have the advantage of decreased reflection and also increase the distance at which writing could be read. Books printed in good type on reasonably thick paper are also essential. The Roman letters are decidedly the best. Indeed, it can be positively asserted, were Germany to abolish her execrable type, she would largely free herself from her prevailing myopia. The question of vertical or slant writing may receive passing notice. While there is much diversity of opinion concerning this, the stronger sentiment tends towards the vertical system.

However, it is the continuous work, rather than the kind of work, that produces eye-strain. Teachers should exercise judicious care in regard to the occupations; should see that there is frequent change from desk work to recitations, and also allow intermissions.

Many teachers are deeply interested in this work and, while often overburdened, respond cheerfully to the further tax of alleviating any physical defect as well as directing the mind, but, without some official sanction and system, they are much handicapped. However, it is effort in the right direction and, sooner or later, will surely lead to triumphant results.

LECTURES UPON VISIBLE SPEECH.

CAROLINE A. YALE, CLARKE SCHOOL, NORTHAMPTON, MASS.

[The following is a brief résumé of four lectures delivered by Miss Yale on Monday, Tuesday, Wednesday, and Thursday.—EDITOR.]

At a session of the Committee on Programs, held early last spring, Dr. Bell was urged to give some lectures on the subject of Visible Speech at this meeting, or at least, to repeat the series of lectures given at the First Summer Meeting of this Association at Lake George in July, 1891. Much to the regret of the Committee, Dr. Bell stated that it would be impossible for him to do this, but urged that the subject of Visible Speech should receive some special attention at this meeting and offered to have the lectures alluded to reprinted and published in book form before the date set for this gathering. He has kept his promise, and we have this volume entitled "The Mechanism of Speech" in most attractive form ready for use. This is but one more of the many good gifts the teachers of the deaf have received from Dr. Bell's hand. The book will be invaluable to us, giving, in addition to the chapters on the anatomy and physiology

of the organs of Speech, three chapters of matter directly connected with the teaching of Visible Speech and with the system itself.

It is quite possible that the most profitable way to occupy the hours set apart to the subject of Visible Speech on the program for this meeting would be to review this book of Dr. Bell, page by page, or those chapters of it which treat directly of Visible Speech. Indeed, this plan was considered seriously for a time, but was in the end relinquished. We shall instead, in a simple fashion, study Visible Speech together. It is true that in four short lessons but little can be accomplished, but if in that time even a half dozen teachers are stimulated to begin an earnest study of this subject, the hours will not have been wholly wasted.

Few systems have suffered so much from its friends as this. It has been treated as if it were a mere mechanical toy of no practical value to the teacher. It is not many years since, at the opening of a term of study with a group of teachers, the leader of the class was very courteously told that it was the wish of its members to spend very little time—as little as possible—on Visible Speech. Later it was found that most in the class had already studied the subject somewhat and frankly confessed that they had failed to realize any practical results from the study. This was an astounding statement, but when it was discovered that all this study had amounted to was to give the student an additional alphabet—a set of hieroglyphics as the equivalent of our own English characters—one ceased to wonder that these students found such study unprofitable and desired no more of it. In justice, I must add that I have never had the pleasure of studying with a class who developed more vigorous appetites for this same Visible Speech than this very class. For those of us who in the old days had the great privilege of studying Visible Speech with Prof. Alexander Graham Bell, it can never be a dry or lifeless subject. It must be always instinct with life in every line and curve.

The principles on which the system of Visible Speech is founded were recognized by Prof. Alexander Melville Bell, and the system of symbols in which these principles are expressed was invented by him. By these symbols he was able to represent the pronunciation of any language or any dialect, and also mispronunciations and defects in the utterance of these, but the application of the system to the education of the deaf has been largely the work of our friend and benefactor, Dr. Alexander Graham Bell. Dr. Melville Bell, himself, in one of his later publications, speaks of Visible Speech as

"a scheme of symbols expressive to the eye of the organic formation of the sounds they represent," and adds, "The graphic result is hence called Visible Speech." This description is good, but we do not feel that the name given the system is satisfactory: it is not adequate.

Intended primarily for the use of students of phonetics, its adaptation to the use of deaf children came as an afterthought. When first introduced into schools for the deaf by Prof. Bell, the symbols were taught the pupils and for months—and in some cases for years—all language given to the child for use in speech was written in these symbols, while much of the work in the class room was done through writing, written language often being used of the pronunciation of which the pupil had no idea. There must then follow a period of translation from Visible Speech characters into English, and from English into Visible Speech for pronunciation. It is possible, had there been only speech to teach to the deaf child, this might have been the ideal way in which to do the work, but when language and general development pushed their claims forward, thoughtful teachers paused to consider if there was not some other way to the desired end which would not so long delay the formation of the habit of thinking in speech—in the motions of speech, so long delay rapid communication between teacher and pupil.

The greatest loss, in the abolition of the characters of Visible Speech from the school room, was undoubtedly the taking away from the teacher the rapid means of reproducing imperfect speech in contrast with correct speech. It was an immense advantage to be able to show the child clearly just what he had done, and by contrast help him to so use his organs of speech as to produce the sound or word as desired. The diagrams which form the basis of the symbols furnish an even more valuable means of such representation since they retain this pictorial character and value for the child, and so can never become meaningless to him, as unquestionably the symbols often did, and do even to the maturer minds, unless their use is very carefully guarded.

The teacher is the one who is first to be taught. When she is master of the subject she will be able to impart a clear idea of it to her pupils, but if she handles tools of which she only in part realizes the possible use, her work will be clumsy and results unsatisfactory; the tools will amount to little more than rubbish—hindering rather than helping her work. It is clear thinking on the part of the teacher that begets clear thinking on the part of the pupil. There

are few more pitiful sights in our school rooms than that so often seen when the earnest attempt of the child at the utterance of sound or word is met by the teacher's quick—almost impatient—"No, no; that is not right," and nothing more. Should not the teacher more justly blame herself for not being able promptly to recognize the exact positions assumed by the child, and instinctively to know what changes in those positions would bring the desired results? It is the power to do just this which the study of Visible Speech may give us. If our knowledge of it fails to do this, it but proves that we have not yet been inspired by its marvelous spirit.

The following is an outline of the succeeding lessons.

1. Center sectional diagram of organs of speech drawn from Manikin. Other possible diagrams.
2. From this diagram curves derived which form basis of Visible Speech symbols for consonant positions.
3. Symbols for positions of the parts used in consonants explained.
4. Symbols for consonant sounds—English and non-English; correct and incorrect.
5. Using diagram of organs of speech, the vowel symbols explained.
6. Symbols for vowels—English and non-English; correct and incorrect.
7. Vocabulary and colloquial style discussed and illustrated.
8. Vernacular effects to be attempted in the speech of deaf children. Rules for combinations.

Following Miss Yale's lecture on Thursday, Mr. N. F. Walker offered the following resolution:

Resolved, That the training of the teachers of speech to the deaf should include a thorough knowledge and working command of Bell's Visible Speech symbols.

The resolution, being put to vote, was passed unanimously.

GEOGRAPHY AND HISTORY FOR INTERMEDIATE GRADES.

FRANCES W. GAWITH, CLARKE SCHOOL, NORTHAMPTON, MASS.

Geography is no longer considered "the knowledge of location" alone. Prof. Morse says, "The study of the earth in its relation to man is now very generally recognized as the best definition of geography. Geography thus defined includes a knowledge of man in his relation to other men and to the plants, animals, and minerals, to the atmosphere, and to the forms of land and water."

Geography work in the Clarke School begins with the study of the region in which the school is situated. There are rivers, mountains, hills, valleys, mills by the rivers, and little villages not far from it. A knowledge of this region is acquired by observation, while that of distant places depends upon the ability of the class to follow in imagination the teacher's description of journeys and of places. Careful teaching of local geography makes it possible for the child to understand the conditions of a section which cannot be visited. Prof. Morse says, "The study of distant geographical forms and conditions, therefore, follows the study of local types."

Pupils in the third grade have half an hour a day for geography. By the end of that year they have learned what a plan of a town or city is, have had some practice in using clay maps and wall maps, have learned the points of the compass and how to answer the question "Which way is —— from ——?" something of the place in which the school is situated, and the various cities and towns in which most of the members of the class live, the state and the section of states to which it belongs, the bodies of water and the mountains in this section, and the ocean on which it borders.

The pupils have gotten their local geography from their walks, from trolley rides to places of interest, and from vists to the mills. When some distant place was to be taken up, a description of it was given by the teacher and her talk was supplemented by a great number of pictures. There are illustrated guide books to most of the cities, and there are the additonal pictures that have been collected, mounted, and catalogued.

All this work proves very interesting to the child, and, even in the first year of geography, he is constantly asking for more information. Whenever a new place comes to his notice, he wants to know in what direction it is from him, where it is on the map,

and to be told something about the place. Maps and geographies are kept in the play rooms and are constantly in use.

The first year's work for some classes stops with the study of the New England States, while other classes are able to take up the study of the largest cities of the United States, the countries of North America, the continents and oceans.

After having gained the impression of the world as a whole in the third grade, three-quarters of an hour a day in the fourth grade is given to the study of the plant and animal life of the earth. This work begins with *plants,* from which we get *food, drink, clothing, building material, fuel,* etc., followed by the study of *animals,* from which we get *food, clothing,* etc. These topics represent months of work. To show what is done on a single topic, we will suppose the class to be studying *tea.* The children visit a greenhouse and find tea growing in the warm temperate room, pictures of tea plants are shown and a tea plant described. Water is poured upon dry tea and allowed to stand that the children may themselves discover which part of the plant is used. The teacher makes tea and the children drink it. A description of each of these steps is a good exercise in language. The children are told in what countries tea grows, how it is brought to this country, and why we import it. A little later the class write what they have learned on the subject, are questioned orally, and then given written questions to which they write the answers. Following are some of the questions found in their manuscript books:

1. Name some countries in which tea grows.
2. What does tea grow on?
3. Name the parts of a tea plant.
4. Which part is picked?
5. What is done to tea leaves before they are packed?
6. What are tea boxes lined with?
7. Why?
8. Where is China?
9. How many miles is it from here?
10. Does China export or import tea?
11. What country imports the most tea?
12. Across what ocean does tea come from the eastern countries?
13. Where is Japan?
14. What are the people of Japan called?
15. Where is Ceylon?
16. In what state in the United States is there a large tea plantation?
17. What country ranks first in raising tea?
18. How does your mother make tea?

If the subject is wheat, a wheat stalk with roots, stem, and grain is brought from the school cabinet. The children take out some of the seeds; they crush them and so find out how flour is made. They are told of the great farms in the West, and are shown pictures of these farms, the farm implements, mills and elevators used. They learn some of the cities which receive the wheat, of the great lakes over which much of the grain is sent, the cities making and selling flour, etc.

Following the work on *plants* and *animals,* the children in the fifth grade sometimes study *things found in the ground,* as, building stones, metals, coal, etc.; *things found in the water,* as whales, fish, coral, etc., and *the air and clouds around the earth.* When these subjects are left, stories of the children of the races are given.[1]

Instead of adhering to the above plan for a class in its third year in geography, it may be advisable to begin the use of a text-book. This work will be hard for both teacher and pupils, for a good geography in simple language has not yet been written. By using a text-book, pupils grow more independent in getting thought from the printed page, they learn more technical terms of geography, get practice in the reading of maps, and also learn how to study without committing to memory. The primary geographies of both Frye and Redway have been used for this grade. Redway's "The New Basis of Geography" is a book which is very valuable to a *teacher* in either the fifth, sixth, or seventh grades.

Outlined briefly this is the work of the three years in the Intermediate. At the end of the first year's work in geography, the children have acquired information which many hearing children get from the conversation of older people. From that time on, a pupil has need to do more than to commit to memory in order to do good work. For example, in the second year of geography he must *reason* that if a country raises more wheat than it needs, it sells some of it. If another country buys this wheat, it must be that it does not raise enough for its own use. That if it does not raise wheat, the climatic conditions are unfavorable to its growth, etc. The nature work of these grades embraces much that is closely connected with these subjects—the planting of seeds, study of animals, observation of the weather, etc.

The animals kept in the school room during the past year were

[1] An excellent paper on this subject, written by Mrs. Horace P. Smith, at that time a teacher in the Clarke School, may be found in the Report of the Third Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf.

crickets in the window box, caterpillars and chrysalids in the breeding box, a canary, fish in the aquarium, turtles, a red squirrel, and a white rat. During the winter, out of doors, there were to be fed red squirrels in large number, and the birds. In the spring, frog's eggs and toad's eggs were brought in, earthworms, tent caterpillars, and occasionally a beautiful moth. These animals the children have studied about, helped take care of, and become fond of. Children, who from training would have been terrified at the approach of a mouse, have found the white rat a nice, little pet. A visitor would have been surprised to see during a recitation the head of the rat peeping out from a boy's blouse. The children have planted seeds in the window box and in beds out of doors, have watched the buds and leaves on bushes and trees, learned the names of the common birds, made observations on the weather, and measured shadows.

An earthworm seems an ugly, almost repulsive thing, and often a child's first impulse is to destroy it, but never, after he has learned something of its usefulness, its incessant work, have I known him to feel anything but kindliness toward it. Children, through this sort of study, have learned to use their eyes better, have begun to feel the beauty of the world, and to live the life of the man "who loveth best all things both great and small."

Mr. Redway says: "Much is said about the correlation of geography and history nowadays, and, indeed, one might as well endeavor to divorce water and the quality of wetness as to separate these two studies one from the other. Each, however, has a distinct aspect; the one is cause and the other is effect."

The simple outline of history attempted in the intermediate department is begun in the third grade. Stories of a few men and a few events are told in this grade and retold each succeeding year more fully in connection with the national holidays.

The little children begin before Thanksgiving to learn something of the Pilgrims and the Indians. The teacher tells the story, illustrating it with many pictures and Indian relics. The same plan is followed in giving the class the story of Washington, so that, when the 22d of February comes, every child in the house knows some thing about Washington. The school rooms are decorated with pictures and flags for the Washington Birthday parties which are held in the afternoon of that day. For these parties the games are, so far as possible, appropriate to the day. The interest of these

little people may, at that time, be greater in the party than in the man, but those who have watched the children in the grades above know that in the end something like patriotism is the result. The story of Lincoln is told before the anniversary of his birth, the interest of this grade being centered in Lincoln as a boy.

As these national holidays come, the drawing teacher makes her work conform to the spirit of the day. This work and the practice of putting up pictures temporarily in the play rooms, appropriate to the day, often aids the grade teacher.

In the next grade, the fourth, these same stories are told, but more fully, other stories added, and the class held responsible for more work than in the previons year. Considerable time is given to the story of the Indians. By Thanksgiving the boys have built a house on the play ground, which resembles a log house of the Pilgrims in their imagination only, but which serves its purpose on Thanksgiving Day when the children play with great zest the landing of the Pilgrims and the First Thanksgiving.

If little children may be taught history in such a way that they "live in imagination the scenes of the past," and dead heroes are still living to them, we may be sure this study may in future years bring to them, in a greater or less degree, the love of country and the influence of noble men which shall make of them better citizens and bring to a few, at least, the genuine companionship of these great men.

When the story of Washington is retold in this grade, the fourth, life in the colonies is touched upon, the dependence of these colonies upon England, the American Revolution, and the beginning of the Republic. On the anniversary of Lincoln's birth the story of his life is retold and something is taught of the Civil War. On Patriot's Day, the 19th of April, the story of Paul Revere and the Battle of Lexington and Concord is given, and on the 17th of June the story of the Battle of Bunker Hill.

In the fifth grade, instead of beginning the Thanksgiving work with the story of the Pilgrims, the teacher tells the story of Columbus. She shows the old trade route between Europe and Cathay, she tells of the blocking of this route by the Turks and the subsequent results. Following the discovery of America, several of the most important discoveries of that time are given, and the four nations making settlements in the New World and the object of each. The claims of these nations are shown by the children with colored crayons on an outline map. Stories are told of Sir Francis

Drake, Sir Walter Raleigh, and other men of that period. The name of Virginia must be associated with Queen Elizabeth, and the settlement of Jamestown and Plymouth with James I. The dates of a few important events are given and, so far as possible, other events are grouped about these; as, the date of the settlement of Jamestown is fixed and the children are told that one year after that Quebec was settled, four years before it Queen Elizabeth died. The date of the settlement of Plymouth is given and the fact that one year before that negroes were brought to Virginia; three years after it New York was settled. Following the story of the Pilgrims and the first Thanksgiving the thirteen colonies are considered in three groups. Life in the New England group is contrasted with life in the southern group, and the effect on the customs and industries of the two people, as affected by the difference in geographical environment, is noted. The pupils are much interested to know about the life of the colonists, their homes, customs, industries, modes of travel, and attitude toward education.[1] A collection of pictures and relics has been made to illustrate this work. The struggle between France and England for supremacy in the New World is touched upon and the result of the contest is shown upon an outline map.

The children in this grade, the fifth, have learned a few facts about the government of the United States so that they may begin to understand the principle of "no taxation without representation," and the injustice of England's manner of governing her colonies in America. Additional facts in the Life of Washington and the Revolutionary War are given, and the loss of the thirteen colonies to England is shown on the outline map. A snow fort on the play ground is often the scene of conflict between the British and Americans. The most popular boy represents Washington, his best friends the Americans, while the younger boys on the ground have no choice given them, but must always represent the defeated British.

The next national holiday is the 12th of February. Before retelling the story of Lincoln, the attention of the children is called to the fact that previous to the Revolutionary War the English settlements were east of the Appalachians and the reason for this inquired into. They discover that geographical growth is along the line of least resistance.[2] The children like to know what the life was of the pioneers who went over the mountains, what their clothes were, what they raised, where their produce was sold and why. Attention is called to the large plantations that were in the South, and

[1] Gordy. [2] Redway.

the demand for labor. In telling the story of Lincoln, emphasis is laid on the character of the boy and the man, his industry, perseverance, and honesty.

Before Patriot's Day, parts of Longfellow's poem, "The Ride of Paul Revere," are learned and the Battle of Lexington and Concord retold.

On the 17th of June the teacher tells the story of the Battle of Bunker Hill, and no class has failed to be fired with patriotism when told how the brave men rushed to the defense of Boston after the "Battle of Lexington," as it was called. The children are told how messengers on horseback carried the news to all the colonies, how Putnam and others hurried to the front, so that in a short time there were sixteen thousand men forming a line from Jamaica Plain to Charlestown Neck with the purpose of driving the British out of Boston; of the fortifying of the hill, which the Americans succeeded in accomplishing in advance of the British, a position which, if held, made it possible to drive the enemy out of Boston. Finally, they are told of that clear, bright day, the 17th of June, the housetops in Boston crowded with people, the British warships opening fire on Charlestown, the troops marching gaily up the hill with drums beating and colors flying, without a thought of repulse. They are told of the bravery of the enemy in meeting the deadly fire of the Americans and the taking of the hill, but after such fearful loss that "the belief that America could not fight was that day dispelled forever."

Just before the close of school, the children are told of the signing of the Declaration of Independence as a preparation for the Fourth of July, that the day, which often has nothing in its celebration to suggest its meaning, may begin to be to them a patriotic holiday. With this ends the telling of history stories for the year. No text-book, even if there were one simple enough, could take the place of the interested story-teller in these lower grades.

For those of us who teach in the Intermediate Department, a source of inspiration may be found in the work of the upper grades which we follow always with interest and pleasure. No better books can be looked to for information than to those of John Fiske. Fiske dedicated two of his volumes to Edward Augustus Freeman in this way: "A scholar who inherits the gifts of Midas and turns into gold whatever subject he teaches, I dedicate this book with gratitude for all that he has taught me." There are many of us who would be glad to pay such a tribute to Fiske himself.

The teaching in the Intermediate of even the amount of geography and history outlined in this paper serves to widen a horizon which must be, at best, narrow. It makes possible the reading of books which could not otherwise be easily understood. These facts and the children's interest in these studies are, in the judgment of the school, satisfactory reasons for giving time to them at this period in the child's education.

CHART STORIES.

By request Miss Yale gave a brief talk on the manner in which chart stories are used in Northampton to enable the young deaf child to begin to read.

The theory of the school is, that the special aim of the work of the first grade should be, to cover with language the thoughts the child already has. The emphasis in the second grade is laid on the reverse process, the aim being to help the child to get out of language the thought of another, whether spoken or written. These chart stories are used not only in the second grade, but also in two or three succeeding grades—the charts prepared for each grade increasing in difficulty. Three of the most elementary charts were then shown:

> September 5 was Tom's birthday. His father gave a birthday present to him. It had white fur. It had two long legs and two short legs. It liked to eat grass and leaves. It could hop.
>
> What was it?

> The pigs.
>
> Two cunning little pigs lived in a pen. One morning they felt very hungry. Soon a little boy came to the pen. He had three red apples. He threw them to the pigs. What do you think the pigs did?

> Birdie.
>
> Birdie lived in the country. She had blue eyes and yellow hair. She had no brothers or sisters but she had two dolls, a cat, and a dog. One day her mother told her

to go out and play with the cat. She took it in her arms and went to the barn. Tabby saw something on the floor. She jumped out of Birdie's arms and tried to catch it. It ran into a hole. Birdie laughed and said, "I am sorry you lost your supper, Tabby."

Miss Yale stated that it was sometimes found necessary to do a little introductory work in order to give pupils the story idea. For this work a picture is used, and the children are helped to think back and forwards in point of time from the picture, so constructing their own story. This exercise usually proves most helpful. A large number of short stories, told through speech-reading before chart stories are taken up, also help greatly.

Usually a chart story is read with the teacher one day, and on the following day, after the pupils have hastily reviewed the story by themselves, the chart is put away and four or five questions are asked about the story. So far as possible questions are asked which cannot be answered by the language found on the chart. The same chart is not used twice. The pupils are always eager for new ones. Fifteen minutes a day is devoted to this work, the aim of which is to arouse the pupil's interest in reading. It is not intended that they should commit the language of the charts to memory; indeed, often the language forms used are beyond their own ability to use; but from them they can obtain a clear picture as one may get a clear idea of what one reads in a foreign language long before he is able to use all the constructions employed on the pages he reads.

LANGUAGE WORK IN INTERMEDIATE GRADES.

SUSAN E. BLISS, INSTITUTION FOR THE DEAF AND DUMB, MT. AIRY, PHILADELPHIA.

Through all grades in a well-planned school for the deaf, from lowest to highest, should run long, straight, unbroken threads of language teaching, the warp which gives form, firmness, and durability to the whole fabric. History, geography, arithmetic, each weaves in its own special design, its own peculiar coloring, its own individual quality; but underneath and through them all run, of necessity, language and language teaching, for language in some form is the material from which and with which must be wrought, in large part, the results we are all striving for in our work with deaf children.

For present consideration our language work may be divided into two parts, briefly headed (*a*) acquisition and (*b*) use. Acquisition of language may be roughly likened to the spinning of the threads. Design and coloring must be given by their intelligent and varied use. Under each of these heads comes such a nice intermingling of the formal and the informal, such a blending of the scientific with the natural in our methods, that we find it difficult, at times well-nigh impossible, to bound with well-defined rules these two provinces of our work or to give minute directions for each step of the way as it advances through them.

In the Pennsylvania Institution for the Deaf the fourth, fifth, and sixth grades are those classed as intermediate, these numbers corresponding approximately with the number of years pupils have been under instruction in the school. The methods used in language teaching in these grades do not differ in essential points from those used in immediately preceding and immediately following grades. Lines between primary and intermediate and between intermediate and advanced language work are as intangible as those drawn by geographers around the earth's surface. They are visible on our plans of work, but in the very nature of things invisible elsewhere.

Before the first of these lines is reached the deaf child's most imperative need is for language with which to express his own necessities and desires, to recount the daily experiences of himself and those around him, or to relate similar events that have come within his past experience to ask questions concerning the persons, places, things, or occurrences which now interest him or have in the past excited his interest.

He comes to it bringing many threads in his hands, for he is equipped with a goodly stock of nouns, proper and common, singular and plural; a variety of adjectives in positive form; the simple personal pronouns; eighteen or twenty prepositions; a few adverbs; and a very few conjunctions. Of active verbs he has a large number, which he uses in indicative and imperative moods, in present, past, and future tenses, in singular and plural numbers. He has also become more or less familiar with the progressive form of the verb.

With this equipment of words it is, perhaps, unnecessary to say that of sentence forms he has at his command the simple declarative, imperative, and interrogative, negative as well as affirmative.

To these threads he has as yet learned to give but few colorings

and with them to form but a few modest designs—simple little letters and journals and very simple descriptions of common objects.

It is disappointing to the child in some instances that no bump is appreciable as he crosses the line between the first two departments of our school, and that he finds himself in the second with no sudden change of intellectual scene to mark his entrance. During the first half of the year his path leads him up an ascent so gradual that he is hardly aware his horizon, little by little, is stretching farther from him and more objects are becoming prominent in his enlarged field of vision. The ascent is made gradual because just here is reached a critical period in his mental development. Information of various kinds has been crowded upon him during the last three years, calling for thought along lines previously unknown to him. The newly unfolded faculties of his mind have been weighted to the straining point and care is needed lest the proverbial last straw be added now. His declared ambition to learn much that is new and hard must be restrained—though not deadened—for a few weeks, since experience has shown us the danger, the unwisdom, of too rapid an acquisition of information at this time, with its proportionate increase of vocabulary and sentence form. The deaf child should no more be allowed to gorge himself intellectually than physically. Mind as well as body cries out for time for its necessary and natural processes. The kind and the amount of food to be administered to either, and the length of time to be allowed for its consumption, may be determined and regulated by us; but when it comes to the processes of digestion and assimilation, mental or material, nature warns our hands off, saying, "My times are of my own arranging. Hurry me at your own risk. Give me my own time and give me well-directed exercise and practice. Leave the rest to me."

Acquisition, therefore, in our lowest intermediate grade, gives place for a time to use. The work for the present becomes the sorting and classifying of threads already spun, the adding a detail here and there to a design already originated, the turning an angle into a curve, perhaps, the giving a twist here or a turn there to threads found to be rough or uneven, strengthening and beautifying what is already well begun, but not attempting anything radically new. This offers wide scope for tact, ingenuity, and skill on the part of the teacher. Her strength or her weakness, her aptitude for the work she is attempting or her lack of it, have here full display. She is somewhat in the position of the housewife who, on Monday, finds

herself with Sunday's roast on her hands as the basis for luncheons and dinners for half the week to come. She may rise to the occasion with menus varied and appetizing, or those under her care may wearily consume cold beef *ad nauseum.*

The first few weeks are devoted almost exclusively to review work, the teacher making careful inventory of principles surely fixed and noting with equal care points of weakness in the pupils' language.

Pupils are now taught to classify their nouns and to generalize a little. This has been led up to in the primary grades. Under such headings as Fruit, Animals, Flowers, etc., will doubtless be written, upon request, a satisfactory number of nouns belonging to those classes. But when, "What is a cherry?" is asked, "A cherry is red," "A cherry is round," or, perhaps, "A cherry is to eat," is the answer elicited, not "A cherry is a fruit." "What is a dog?" brings out, "A dog is large," "A dog is small," "A dog is cross," "A dog is kind," or possibly, alas! "A dog can bark;" hardly the general truth, that a dog is an animal.

Need for the practical use of these general nouns is created by the little topic or object lessons which now take a prominent place in the week's program. If he has not already been taught to do so, the child now learns to describe single objects in a few simple sentences, the teacher leading him to discriminate between essential and non-essential details. And after some practice with the singular form of such nouns, pronouns, and verbs as are required in describing a familiar flower, fruit, animal, or common object, he is helped to the use of their plural forms by having placed before him for description more than one object of a kind. When he has acquired the language forms most necessary for such work, he is led to simple composition work—if so large a name may be given to work so very modest.

In exercises comprising as these do only seven or eight simple sentences, no great variety of expression is to be looked for, so early in the year we are neither surprised nor disappointed when, after examining familiar things and talking about them with their teachers, exercises like these are presented by the children:[1]

[1] The specimens of composition work given in this paper are original exercises with mistakes uncorrected.

About chestnuts.

Chestnuts grow on chestnut trees.
They grow in the burrs.
In the fall the burrs open and the chestnuts fall out.
The people and squirrels pick them up.
The shells are brown.
The insides are white.
Some people cook them.

About apples.

Apples are fruit.
They grow on apple trees.
Some are sweet and some is sour.
Some are red and some are green and some are yellow.
They are round.
They have small brown seeds inside them.
They have smooth skins.
People like to eat them and make apple pie and apple sauce of them.

Peaches.

Peaches are fruit.
They are sweet.
They are covered with soft skin.
They have red stones inside them.
They are round.
They grow on peach trees.
They are red and yellow.
We like them so very much but John does not.

Later in the year traces of individuality are expected to appear in such work, though simplicity is still its keynote, and in it is sure to be found the practical application of some of the new principles and new phrases pupils have been working on. For example, about the first of February such exercises as the following are handed in:

About cows.

Cows are animals.
Farmers keep them.
They give us some milk.
They are very kind to us.
Every summer I drive my cows to the pasture and I drive them home after supper. Sometimes I drive them home before supper. Every day my mother and Carrie milk the cows. Last summer I learned to milk. I could milk a little.
Some have horns but the rest have not. They give pailfuls of good sweet milk.

Some are red, some are black with white spots, some are brown, some are red and black spots.

The butchers kill them to get meat.

It is called beef.

Our cows are very gentle.

About cows.

Cows are animals with horns.

They are covered with hair.

They are gentle.

Their meat is called beef.

Some people milk them and they give a pailful of sweet milk. The milk makes us fat.

Some people drive them to the pasture in summer.

They eat grass, hay, corn and meal.

Some are red, some are red and white spots, some are black and white, some are light brown.

About cows.

Cows are animals with horns.

They have calves.

Calves are cows' babies.

They live in the country.

Sometimes the butchers kill them and sell their meat.

Their meat is called beef.

They give milk.

Every morning the farmers drive them to the pasture to eat the grass.

After supper they drive them home.

Every winter the farmers keep them in the barn because it is cold.

Although still very simple, in these may be noted the compound sentence, the infinitive used as the object, the potential form of the verb, adjective and adverb phrases, and the infinitive expressing purpose, all of which points pupils have had work on during the first half of the year.

The index to Miss Sweet's lessons in English No. 2 forms the framework on which much of the formal language work in this grade and the next is shaped. This index is so well known to us all that it seems but vain repetition to enumerate here all the points it embraces—the progressive form of the verb, the compound sentence, the infinitive as the direct object, the potential form of the verb, the predicate adverb, adverbial phrases of degree and quantity, adjective phrases, comparison of adjectives and adverbs, the infinitive express-

ing purpose, the imperative form of the verb, especially with to ask and to tell, and work with indirect and direct quotations.

In working up these principles many ways and many means are used. Action work, story and picture work, questions and answers, letters and journals, all have their place, and in each and all of them is emphasized the necessity of properly sorting and arranging ideas as well as words, the need of distinguishing the important from the unimportant, the necessary from the unnecessary in both thought and its expression.

Ability to thus discriminate is not likely to develop in the deaf child without careful cultivation, despite the fact that his hearing brother acquires it he knows not how. By the time the latter's infant lisping has grown but a trifle stale to the ear of those around him, he has become at least dimly aware that, except his parents and a possible doting aunt, none cares to hear him say he walked across the room, nor yet that he opened a door, though interest akin to excitement is awakened in the entire household by his statement that his brothers are playing Indian with a razor for a scalping knife. He soon learns that no concern would be aroused by his narrating that he went into the hall and took down his hat and coat, that he put them on, buttoned his coat, and went out of doors. So he makes straight for the point of his story and in breathless haste shouts out that his little sister is in the garden making mud pies in her father's new high hat. Habit is strong, mental or physical, and woe to that child, deaf or hearing, who fails to acquire at an early age this power of discrimination so essential to an adequate perception of the true proportions of ideas and to a right understanding of their relations and values. He is doomed to go through life catalogued as a second Dogberry, or at least to be written down an unmitigated bore. Should we, then, hesitate to devote much time, much energy, and all the skill at our command to fostering in the minds of our deaf pupils the use of this power to discriminate till it is developed into a fixed habit? Too much stress can hardly be laid on the responsibility that is ours in this part of our work.

The stories given by Miss Sweet furnish excellent examples of the application of principles offered in the index already referred to, and are, at the same time, of great value to the intermediate teacher in their suggestions of language lessons innumerable. The vocabulary for journals and letters and for geography work, after its introduction in the middle of the first intermediate year, may be

said to almost take care of itself. Need for its constant increase is obvious to pupil and teacher alike, and demand and supply move on easily side by side. Not so with the vocabulary of house and of garden, of orchard and farm, of field and of forest, of travel by land and travel by sea, and care must be exercised lest we give it less than its full share of our time.

It is unsafe to assume too confidently a knowledge on the pupil's part even of names of such common things as articles of furniture, games, playthings, kitchen utensils, garden tools. All must be put to the test in intermediate grades, if not taught outright, and these lessons are a constant reminder of our need to do so. On every page are excellent starting points for language excursions far afield from the stories themselves. For instance, the wide-awake teacher finds in one the name of a well-known flower and is reminded to teach the names of other common varieties and the difference between wild and cultivated flowers, her pupils summing up the results of the lesson, perhaps, in a little composition on violets. The list of topics used in composition work during a year always shows many which have been suggested by these lessons.

The stories are first given orally, exact lip-reading being demanded—exact verbal lip-reading if this term may be used to distinguish it from that whose work is the reception of ideas without regard to the language in which they are conveyed. Then come question, sentence, action and composition work, formal and informal, at the discretion of the teacher. Possibly it should be explained here that the work done with these lessons is quite distinct in purpose and handling from that done in other forms of story work used. In each and all of these it is some language principle that is taught or tested, or some new word or phrase, and more of the formal is brought to the fore, special attention being called to the sentence form. The endeavor is to so definitely impress on the child's mind the forms of expression used, as well as the ideas they contain, that he may in the future find it easy and natural to employ such forms to express his own thoughts. Unconsciously if possible, consciously if need be, the deaf child, like the hearing, must learn the current, conventional language forms in which to clothe and convey his thought to others, if he is to know the blessedness of giving as well as of receiving, and it is our part to help him realize that his thought, be it ever so beautiful or ever so forceful, must lose something of its force and much of its beauty if confined in a maimed and crippled sentence form.

Together with this more formal story work goes much that is informal, where attention is centered on the substance rather than on the form, pupils reading stories from the lips or from the printed page to reproduce them orally or in writing, in any sentence forms they may elect to use, provided they be correct ones. The resemblance between these two kinds of story work may seem to the children something like that between the sugar-coated pill and the sugar plum. Unless the coating be very sweet and very thick indeed the normal child is likely to reach out for the plum while looking askance at the pellet he stands in need of. The ingenious teacher devises many ways in which unconscious imitation of sentence forms may be fostered, but her chief work here is to select wholesome and desirable ingredients for her sugar plums, to decide when they may be offered, and how many may be partaken of within a given time.

By the middle of the second year a little more elaborateness of design and a little more smoothness may be noted in original composition work, though pupils have become habituated to the use of only the simpler language forms. Not satisfied, we are yet not discouraged by original exercises like the following, unpretentious as they may be, since they show a little more freedom and orderliness of thought and some increase in facility of expression:

About cats.

Cats are domestic animals. They are very tame. They look funny. They have bright eyes. They look for mice in the night sometimes. They are fond of eating fishes, mice, and drinking milk. They walk softly. They live with people, and they are covered with fur. They do not like to play in the water. If anybody troubles them, they scratch them and look very angry. If a dog quarrels with cats, cats look angry and push their fur. If dogs try to catch cats, cats climb trees very fast.

About horses.

Horses are large animals. They are very intelligent. They have four feet and have hoofs on their feet. They have manes. Young horses are called colts. They can run fast. Sometimes they kick people. Sometimes they are black, brown, gray or white. They eat grass, oats, and corn. They live in stables. They have harnesses. They draw wagons, carriages, and buggies. They draw heavy loads. They eat oats and corn out of mangers. Sometimes they run away.

Dogs.

Dogs are little domestic animals. They are called Newfoundlands, fox-terriers, St. Bernards, mastiffs, bull-dogs, and other names. They have four feet, and some of them are brown, white, black, and have colored spots on. They have nice tails. Sometimes they have short ears and sometimes long ears. Dogs are fond of eating meat. They can jump, bark, and run fast. Baby dogs are called puppies. They look cute. Sometimes dogs can do tricks. They can stand on their hind feet, walk, and carry a pipe in their mouths carefully.

We are still going slowly, at this time, with our formal language work, hoping these simple forms may, by frequent use, be made so entirely their own that pupils may presently be able to expand them into more elaborate ones without the lack of correctness so often met with and so much to be deplored.

In all intermediate grades pupils are encouraged to read, and they should now be able to grasp ideas from spoken, written, or printed language much more complex than that which they themselves can use. In all grades, too, where a difficult form is found necessary for the expression of a child's thought, it is unhesitatingly given to him, and he is led to its use as often as his need for it occurs.

In addition to the points before enumerated, pupils while in the intermediate grades have work on the passive voice of the verb, in the tenses they have become familiar with, on the verbal noun and adjective, on the superlative form of adjective and adverb, and on the relative pronoun. Some classes touch on more principles. All should have these.

In the third grade, use is still the watchword, though acquisition is not neglected. We now find a decidedly greater freedom of thought, together with greater ease of expression, more facility in receiving ideas from complex language and moulding them in their own simple forms. In this year again many of the principles dwelt upon are those which have been previously presented. Vocabulary is enlarged, of course, sentence forms are expanded, more independent language work is demanded. Yet in the main the work seems but the elaboration of the old designs. Outlines are filled in a little more, a few softer shades are added to the colorings, and new threads are placed within the worker's grasp. Not too many at a time lest in the yet unskilled fingers which receive them they become but a useless mass of tangles, hindering, not helping, in the work which should

now becomes more rapid. It should ever be borne in mind that the intermediate pupil is not a skilled and finished workman, and that only with proper training and much practice is he likely to develop into one. Familiarity with his language threads, accuracy of mental eye, and deftness of mental finger must be acquired before he is ready to take up the more elaborate work of advanced grades. Under intelligent guidance there must be practice today, practice tomorrow, practice this week, practice next week, practice this month, practice next month, throughout all intermediate grades, and teachers must work on faithfully, hopefully, content to wait for the result of their efforts to be made visible in later grades.

ARTICULATION IN THE INTERMEDIATE GRADES.

FRANCES WETTSTEIN, SCHOOL FOR THE DEAF,
MILWAUKEE, WIS.

That the articulation in the intermediate grades is of vital importance, no one who has had any experience with the deaf will question. It is comparatively easy to teach the child the elements, but it is difficult, indeed, to combine these elements in all their various combinations; to give each its proper accent, poise, and proper quantity in relation to the word or sentence in which it occurs; therefore, if the teaching of articulation in these grades is not the best, all the good work done in the primary grades is of no avail.

If my opinions in regard to some of the essential points in teaching articulation are contrary to those expressed by persons considered authority in this country, please do not consider it conceit or presumption on my part in attempting to express these to you; but kindly lay it to the training I received,—from one for whom I had the greatest regard; whose equal as an articulation teacher is hard to find; and whose ideas were gained from observation and experimental work in the different methods employed in this and European countries.

The criticism that Europeans have to give regarding the articulation in America is its unintelligibility. This criticism comes not from one only, but from nearly all who have visited the schools here. Dr. Ferreri says, "It is enough if the child moves its lips and emits a sound, no matter how indistinct, which impressed me as a laryngeal mumbling;" and again, "The larva of speech which only the teacher herself understood by indulgence."

Miss Schmidt, though she did not express herself so strongly, was of the same opinion. She says, "I am certain that teachers, as well as pupils, in America can still improve in articulation work." You all will agree that we ought to learn something from these criticisms given in a kindly spirit.

In a general way, they agree that we have mastered the difficulty of placing the voice, and by the rhythm work and intuitive exercises for the flexibility of the vocal organs have had good results in producing quite agreeable voices. But of what value is a well placed and smooth voice and fluent speech if the speech is not intelligible? Surely the voice of a deaf person, no matter how exact the rhythm, can never be considered musical or pleasant to the ear; but it is the utility of speech that is appreciated, and therefore intelligibility should not be sacrificed to smoothness of voice. But it is for us to learn how these two can be combined.

It is not within the scope of this paper to tell how to place the voice, or how to obtain the elements, for this belongs to the primary work. But, after the voice is well placed and each element can be given well, the difficult part of giving each element its due value begins. And here the disagreement between our friends in Europe and the authorities in this country is centered; namely, upon the relative and absolute value of the vowel or the consonant.

Before the late Mr. Binner had been in Europe, he employed, what I for convenience sake shall call, "the American method,"—that is, he laid special stress upon the proper formation of the consonants; but after he came back, his verdict was the same as that of others, viz., that the articulation in Europe was far better than here in America, and he thought it was due to our not laying enough stress upon the proper formation of the vowels. After experimenting, he came to the conclusion that in the English language, as well as in all other languages, the vowels are the bearer of the word, and that upon their proper formation the intelligibility of a word or a sentence depends. Though a few persons who enunciate with extraordinary precision, exactness, elegance, and grace can make themselves understood by giving the consonants correctly and by giving only an indefinite sound for every vowel, it does not warrant our accepting this as a criterion in regard to the deaf; for, if the average hearing person, and among these some public speakers, cannot be well understood when they do not give the vowel sounds their proper attention, how can we expect it from the deaf? And, listen to the speech of those pupils who have sound perception, or defective

hearing. Their speech is readily understood even though they drop all the final consonants and enunciate the others only very imperfectly. The articulation teacher is often heard to say that Fred's speech with his hearing is so poor compared to John's who is totally deaf; but for all that, it is Fred who is understood by strangers and not John. But it is not for me to theorize, but simply to relate the results we received from our experiments, and I can say that it is my conviction that the articulation can be improved a hundred per cent by giving the vowel its due value. The consonants are not to be neglected, but, after they have once been learned, they are comparatively easy to give in words. With the vowels, it is different. The difference between the vowels in knit and net, not and nut, Kate and kite, board and bird, is so slight that only the most acute sense of touch will detect the difference. For this reason it is essential to lay great stress upon training the child's sense of touch, and it has been my experience that the teachers who employ this sense liberally gain the best results.

I presume it is superfluous for me to mention that I do not mean that a child should be entirely dependent upon the hand and not be able to regulate his voice without it; far from it. When the child knows the word or sentence he must be able to say it independently. As some singers cannot sing well without instrumental accompaniment, so some of our pupils need the aid of the sense of touch longer than others.

Besides resorting freely to the help of the hand, we have three principles which, in general, assist in the proper formation of the vowels. The first is, "Keep your tongue down." This does not mean that you should not raise the tongue in forming the "r" or "l," but rather that you should keep your mind upon the following vowel instead of upon the "r." If you think of the "r" you will prolong it and obliterate the vowel; while, if you think of the vowel you will give a short, distinct consonant and a good pure vowel. This principle applies to all other consonants.

In connection with the maxim of keeping the tongue down, we also claim that placing the point of articulation for each respective consonant as far forward as possible will bring the tone of the following vowel forward and help toward the formation of a clear tone.

The third principle is this: In sounds which cannot be readily seen, draw attention to the lips instead of to the tongue in making corrections. We know that the vowel is dependent upon the form of its resonator for its characteristic tone; thus a high vowel must have

a short resonator and a low vowel must have a long one. This can be brought about either by manipulating the tongue or the lips. We find that when we tell the child to raise his tongue he will usually draw it back and give a guttural sound, while if we simply direct the movement of the lips, which he can readily see, his tongue will nearly always come forward and a clear vowel be the result.

As intelligibility is of primary importance in teaching articulation it must receive the first consideration; smoothness of voice, proper phrasing, accent, fluency, and modulation are essential accessories and accomplishments, but should not be given precedence over the former. Distinctness can be brought about by daily drill on the vowel elements that are very much alike as ĭ, ĕ; ạ, ȯ; ā, ī; and the respective long and short vowels as ē, ĭ; ā, ĕ; ä, ȧ; u̱, u̱; etc.; rapid drill on difficult or similar vowel and consonantal combinations as, bä, pȧ; da, ta; ka, ga; nĭ, lĭ; skĭ, stĭ; scra; rä, är; rē, ēr; etc. Sometimes pupils are able to give the simple element, but drop it or give it imperfectly in the sentence. For this it is profitable to give rapid drill on a sentence that contains the difficult elements repeatedly; as, Round and round the rugged rock the ragged rascal ran; or, She sells sea shells.

In order not to become so accustomed to the child's speech "that is only understood by the indulgent teacher," it is a good plan to take a reading lesson with which the teacher is not familiar, and to let the child read so as to be understood by her. When the pronunciation has been corrected so that it is perfectly intelligible to the teacher, let a cadet, some friend, another teacher, or the principal listen and tell what he understood. It will be astonishing to find how often the child is not understood when his speech seems perfect to the teacher.

Smoothness of voice, accent, phrasing, and fluency may be grouped under one head. Smoothness of voice may be obtained by singing the vowels ē, ä, u̱; ū, ī; ow, oy, ow, ī, making a circle with your hand to indicate smoothness.

Accent is added by singing syllables as ba′ ba; da′ da da; da′ da da da; then short smooth sentences, as, I love you; and later, simple songs.

If a piano is at hand, these exercises are made very enjoyable, for the majority of the deaf love music, strange as it may seem. It seems very wonderful to me that their singing does not seem disagreeable. It seems like a monotonous chant, but there seldom are discords. The voices of children of a certain age seem to respond intuitively to a certain tone in the musical scale.

The accent in all this work should be marked but not jerky, as it used to be. We Americans have been criticised upon this point also. It was said that the speech of our pupils was more monotonous than that of pupils in Europe, and it was thought that we laid too little stress upon accent, in the beginning. I doubt whether they lay greater stress upon it than we, but it may be that they gain better results. It was said that the German teachers used greater force. But does not too much force and too great exertion on the part of one muscle have a reflex influence upon the action of others? To make myself more clear: If a child stamps his foot, or uses his arm very forcibly, and at the same time speaks the word, this word will also be forced and harsh. I should certainly not advocate anything that would tend to produce a harsh voice, for if we must either have monotonous speech or harsh voices, I should prefer the former to the latter. In order to obviate all jerkiness from the exercises, we have substituted the motion of a large circle on the accented syllable and smaller ones on the unaccented syllables, instead of the beat.

This rhythm work and voice culture have their place and are valuable, but they must not be permitted to take the place of the old-fashioned drill on longer sentences, paragraphs, or a stanza of poetry. The singing has a tendency to indistinctness of articulation, and we have found that it is best not to let the children sing those songs or verses that they are to speak. In drilling upon a sentence for fluency and proper phrasing, the sentence is divided into its principal parts:

Life is *real*/ life is *earnest*/
And the *grave*/ is *not* its goal/
Dust thou art/ to *dust* returnest/
Was *not* spoken/ of the soul./

In an exercise like this we can give each element its true value, drill upon the combinations, proper accent, phrasing, and fluency. No time spent upon this work is lost; for what the child masters here will help him in other work.

As the pupils have learned to breathe properly in the primary grades, I have not mentioned it here; but as there are always a few who will insist upon breathing through the mouth, a few minutes every day are spent in breathing exercises, unless you combine these with rhythmical exercises and those for fluency, which require proper breathing.

As in but very few schools there are enough pupils who have so much hearing as to be able to be taught by the auricular method only,

I feel that I am not trespassing upon any other person's topic by saying a few words regarding the development of latent hearing, for it is usually done in connection with the articulation work.

Perhaps you have heard some teachers say, "There is no time for auricular training." To me such a statement seems almost criminal. No time for something that may prove the greatest benefit that could possibly come to a deaf child! We all know what a difference there is between the speech of a child with even the faintest sound perception and that of the totally deaf. Or, perhaps, you have heard educators say, "That child has not enough hearing to be of any value to him, therefore we do not give him auricular training," or, "We have not tested that child; I do not know whether or not he has any hearing;" or, perhaps, you have seen children with quite a great deal of hearing who have not even been taught to speak; or, perhaps, you have never heard such statements, nor seen such conditions and, therefore, do not believe that they actually exist.

One of the points the articulation teacher must bear in mind must be the modulation; and here her power is limited except with those who have, or with whom she can develop sound perception. With the totally deaf, it is the sense of touch that will make him able to modulate his voice. By training the pupils to distinguish the difference on a musical instrument between the vibrations of a very low tone and a very high one, and then letting them observe the similarity of the vibrations in the throat, they will be able to modulate their voices a little; but here it is that the work with those who have sound perception is most gratifying. By sound perception, I mean those who hear the sound of a whistle or hear the music of a phonograph when reinforced by a tube that transmits the sound directly to the ear, or "the hearing that is of no value." If it is not developed, it *is not* and never *will be* of any value; but in nine out of ten cases it can be developed so that the child can, at least, hear the vowels.

To devote a special period every day to persistent and conscientious work in auricular training belongs to the primary grades, so that, by the time the child enters the intermediate grades, the teacher can definitely determine to what extent she may profitably employ the aural method; but even here, with cases who seem hopeless, frequent tests should be given; for, during the period of adolescence improvement in hearing may occur.

But how about the time to drill those who have sound perception? Does it really take so much extra time? Not necessarily.

For while the teacher is laboring to have a child get the correct inflection or emphasis, by simply taking the tube that ought to be hanging at her right hand and shouting the word into the child's ear, she may even be saving time. I need not mention the psychological benefit of the added sense impression that the child receives.

Stimulating the nerve fibers to action by means of the acousticon, or by means of loud musical tones; then to make the child distinguish the vowels through the ear tubes, and later to make him hear the natural voice, or even teach him to carry a melody fairly well, is not easy work by any means. It requires patience and perseverance and a spirit which demands no praise; for often such work is spoken of with contempt, as, "O, yes, that child hears," or, "There are so many hearing children in that school." But the result is gratifying to the teacher who knows that the reward of a thing well done is to have done it.

But all the exercises and all the work, whether in auricular training or in articulation, are done in vain if all the teachers are not constantly alert to the inaccuracies of speech; if they do not train their ears to become sensitive to errors, and if they are not persistent in their efforts to correct these. Every teacher who has the child in hand must insist upon that child's best speech at all times. She must not, at any time, permit carelessness to go unnoticed. She can not at all times be improving that child's special difficulty,—this must be done at special periods, but she can insist upon every element being given to the best of that child's ability.

The secret of success lies in perseverance, hard work, and determination to gain a definite end. If we are lacking in these, we shall have to take a back seat; but, what can be done elsewhere can be done here, and I, for one, would like to show our European friends that we have profited by their criticisms, and that we *can* teach articulation and that we *will*.

SCHOOL SANITATION AND HYGIENE.

ADOLPH KOENIG, M. D., PITTSBURG, PA.

A paper on the broad subject of School Sanitation and Hygiene must necessarily be restricted in many ways in order to bring it within the time limit. Only the most important points can be touched upon, and many, indeed, wholly omitted.

As medicine, in these modern times, becomes more firmly founded on scientific principles, the departments of Sanitation and

Hygiene assume positions of greater importance. The glory of the last quarter of the nineteenth century in medicine has not been so much in the cure of disease as in its cause and prevention. The value of right living in the interest of health and longevity has never been understood as it is now. The causes of diseases, be they functional or due to pathogenic bacteria, are now largely known, and means and methods for their prevention can be scientifically applied. The theories of the middle ages have given way to knowledge that is founded on demonstrable facts. Where a demonstration of the truth is impossible, the medical profession is not unwilling to admit ignorance, but strives by all means possible through ceaseless investigation to solve the mystery, and I believe I am justified in asserting that, before many decades shall have passed, medicine will rest, in all of its branches, on absolutely scientific principles.

In an institution such as you represent here, nothing can surpass in importance, for the sanitary and hygienic welfare of the inmates, a strict, daily medical inspection, for nothing doubtless contributes more largely to mortality than contagious diseases, and most of these are much more readily prevented than cured. A thorough daily inspection would mean the detection and isolation of all cases of contagious diseases during the prodromal stage and the infection of the other pupils entirely prevented, or at least kept within circumscribed limits, and in many other directions would a systematic medical supervision exert a healthful influence. There are many features of hygiene and sanitation to which it is scarcely necessary to refer. It is needless to insist that there should be abundant sunlight in the rooms, and that ventilation should be perfect. In ventilating buildings, however, great care should be exercised to avoid the creation of draughts of air, which are even more harmful in their effects than air defective in oxygen and contaminated with noxious gases. Much, for example, has been said within recent times about the ventilation of street and steam cars, but I am convinced that much more harm is done by the present defective ventilation, which permits a strong draught of air to strike the passengers, than by the temporary subjection to the influence of contaminated air. I have personal knowledge of numerous cases of tonsilitis, bronchitis, and of pneumonia, whose inception could be traced, unmistakably, to a few minutes' exposure to a draught in a moving vehicle. On the other hand, long confinement in an atmosphere laden with noxious gases, and deficient in oxygen, is likewise harmful, but in a different manner. The slow poisoning resulting from such surroundings is rarely

fatal in itself, but the depression of the vital energy which results makes the individual specially susceptible to various diseases, and when once attacked such individuals may succumb because of the depreciated vitality when otherwise the storm might have been weathered.

In the school room, the seats and desks should be arranged with a proper regard to the light. The seats should be adjusted to the size of the child, having regard for the height of the knee, and the desk for the height of the elbow. Either of these points being out of proportion may result in curvature of the spine or other defects antagonistic to good posture.

In a recent paper published in the New York Medical Record, by Dr. R. G. Freeman, entitled The Physical Care of School Children, he formulates five essentials for the preservation of good health in children. I may say that his conclusions have reference to children in general, rather than to school children in particular. He says:

"First. They need ample rest. They should have ten or twelve hours in bed at night, and often with advantage a nap after the midday meal.

"Second. A proper diet: A moderate breakfast, a substantial but digestible dinner, and a simple supper. All these meals to be eaten slowly and well masticated.

"Third. Fresh air. A child should be out-of-doors several hours a day, and when in the house should be in rooms well ventilated and provided with at least 1,500 cubic feet of air space per person.

"Fourth. Freedom from dust and exposure to disease. Infections due to dust and the direct exposure to contagious diseases cause a large part of the sickness of school children.

"Fifth. Freedom from worry and fatigue. Neurasthenia exists in earliest infancy and is common in school children. It is induced by anxiety, and particularly in children by prolonged application. The child can exert itself intensely for short periods without harm, but prolonged application produces marked fatigue."

Many children, I am convinced, suffer from insufficient sleep, nor does this apply to children alone. The time for sleep, in the evening, should be so arranged that the awakening in the morning may be spontaneous. The forcible and involuntary waking in the morning, before nature has accomplished the object at which she aimed through sleep, cannot but be pernicious. On the other hand, sleep should not be sought too soon after a meal, especially if it has been a hearty one, for the processes of digestion are much depressed during sleep and, in consequence, sound, refreshing sleep and per-

fect digestion are impossible. This brings us to his second proposition, namely, a proper diet. It is my opinion that a keen appetite for breakfast is evidence of a healthy condition of the body, and *vice versa.* After a prolonged period of fasting, represented by the time of sleeping, it is reasonable to suppose that nourishment is demanded by the tissues of the body, and hence breakfast should be a fairly substantial meal, of a readily assimilable character. I am also in accord with the writer in his statement that dinner should be a substantial meal, and that supper should be simple in character, consisting of material easy of digestion. The hard work of the day requiring concentration of mind should be arranged for the forenoon. An hour, more or less, of rest should follow the midday meal, after which the tasks imposed should be of a light character for at least another hour.

In institutional life, the periods of study should be broken by intermissions of exercise, if possible in the open air, so that the muscular system, including the heart, may be developed in keeping with the nervous system. Brain-tire, whether due to overapplication or worry, should be avoided. When a condition of brain-fag supervenes, all effort should be relaxed, for under such conditions little or no lasting impressions can be hoped for, and progress is rather impeded than hastened. The judicious intermingling of physical with mental exercise thus becomes a matter of great importance. The exercise should be varied in its character, ranging from play to actions under which various utilitarian objects are accomplished. Under this latter head I would include the different forms of manual training, in which the body as well as the mind is pleasantly occupied. Such exercise, taken approximately about two hours after the midday meal, will serve as an aid to digestion, rather than retard, as were the case if indulged in immediately after the meal. The feeling of drowsiness and lassitude which ordinarily follows a full meal is a normal physiological process resulting from the demand made for blood by the stomach to carry on the process of digestion, and entailing necessarily a deficiency of blood in the brain. This physiological process is apparently much more marked in childhood, as I have had frequent occasion to observe in my own family. In the life of all of my children, there has been a period when this feeling of drowsiness becomes so pronounced that a short nap at table is unavoidable. It is, therefore, wise to pay heed to the demands of nature, and especially so with regard to the digestive functions, for to systematically antagonize her means defective digestion of the

food, lowered assimilation and nutrition, decomposition instead of digestion of stomach contents, formation of toxins which absorbed into the system exert a poisonous influence upon the central nervous system, with its attendant symptoms of dyspepsia and loss of vitality too well known to require enumeration.

The character of the food is also a matter of the utmost importance. The needs of the human organism demand both animal and vegetable food, as is proven by long experience as well as by the character of the teeth, which consist of both the tearing and grinding variety. One of my early teachers was wont to state that the fate of the vegetarian tended to premature senility, due to the hardening of the walls of his arteries, while he who confined himself to an exclusive animal diet might expect a premature death through scurvy or other forms of blood degeneration. The happiest results are obtained from a judicious mixture of foods from both the animal and vegetable kingdoms, nor must *fresh* vegetables with their acids be omitted. Such articles of diet as watercress, lettuce, celery, radishes, and the various acid fruits, though carrying but slight nutritive value, are nevertheless a needful ingredient of a well ordered diet for man. Articles of diet in which starch is the main ingredient should be well masticated, for the first stage of digestion of the carbohydates, of which starch is the principal one, takes place in the mouth. This is especially needful where the articles may have been insufficiently cooked. In this connection, I desire to say a word in favor of soups, and especially of the class of soups in which the leguminous seeds, such as beans, peas, or lentils, form the basis. These seeds, in addition to the starchy matter, are also rich in proteid or albuminoid matter as well as in phosphorus and other mineral substances necessary for proper nutrition. They carry a much greater food value than potatoes, or the seeds of grasses from which the so-called "staff of life" is made. Introduced into the stomach in the form of soup or porridge, no resistance is offered to a complete mingling with the digestive juices, which is often hindered by the form in which potatoes or food made from flour is eaten. Of the proteids beef, mutton, poultry, and fish should be preferred. Veal and pork should be entirely excluded from the diet of school children. Good clean milk, if it can be procured, together with a liberal allowance of butter or other fatty matter, should be abundantly supplied.

A plentiful supply of water as free from mineral matter as possible, and sterile as regards bacteria and animal life, should also

be supplied in abundance. Many persons habitually drink an insufficient amount of water, with resulting constipation and other remote effects often attributed to other causes.

It is scarcely incumbent upon me to warn against foods preserved with antiseptics, or whose color has been heightened with coal-tar dyes. All preservatives, with one or two exceptions, exert disastrous influences on the tissues and functions of the body. Happily the day seems near when absolute cleanliness and hermetic sealing will displace them in all foods requiring preservation.

The same absolute cleanliness needful for the preservation of food should be exercised with regard to utensils. The common drinking cup, especially where many persons are congregated, some of whom may be afflicted with communicable diseases, should be abolished, and this rule should apply to all other utensils or instruments that too frequently are used in common. Stimulating beverages, such as tea, coffee, or alcoholic liquids, it would seem superfluous to condemn, for their influence on the tissues and functions of the immature are extremely deleterious unless used as remedial agents in abnormal conditions.

The subject of bathing is one which is looked upon with considerable difference of opinion by various authorities. That it is possible to err at both extremes I believe to be likely. The action of the skin may be said to be both secretory and excretory; that the excretions should be removed from the surface of the body at appropriate intervals is apparent, but that too frequent ablutions with removal of the physiological secretions is not harmful may be questioned. The ancient Egyptians, Greeks, and Romans, whose predilection for bathing is well known, aimed to overcome the possible deleterious effects by inunctions of oil, and that custom would seem to be appropriate for all who bathe oftener than twice a week.

Much has necessarily been overlooked and omitted in this imperfect discussion of the subject of sanitation and hygiene as applied to schools. As in the case of other allied branches of medicine, sanitation and hygiene are in an evolutionary stage Progress is gradual, but none the less sure, and never has the future appeared more promising than at the present, for reformation and advancement is the universal demand.

DR. CROUTER: I should like to ask Dr. Koenig one question. In a school composed of children of ages from five to twenty, how soon after the midday meal should they be called upon to assume

intellectual work, or work of any kind? In other words, how long should they rest?

DR. KOENIG: I do not believe that there is any hard and fast rule that applies to all cases; but I am convinced that at least two hours should elapse before any concentration of mind should be required. I have had some personal experience in that line, as you may judge from my rather thin appearance; my own digestion is none of the best, and in my youth I very well recall frequent occasions when I attempted to do perhaps some mathematical work immediately after a meal, and always, as a result, acute indigestion followed; it seemed to arrest the digestion of food instantly, and not only was the digestion stopped, but my mental processes became confused at the same time. In my opinion, there should be an hour of pleasant occupation, of play, followed perhaps by some exercise in the line of manual training; because, after the preliminary processes of digestion are well established, then movements of the body aid digestion to some extent by a churning of the stomach contents which takes place during exercise, and in that way the manual training exercise, as I imagine, would be helpful during the course of an hour or two after even a fairly full meal, as I would advise the noonday meal to be. In my opinion, the best time for hard concentration of mind is in the forenoon, the earlier hours of the day, when the body has been repaired during the night's sleep, and has been fortified also by a fairly good breakfast. I insist on a good breakfast. I believe, and have noticed for many years, that individuals who habitually are unable to eat breakfast with a relish will sooner or later develop some form of ill health.

DR. WESTERVELT: Would you recommend, then, a continuous morning school session of five hours?

DR. KOENIG: I would not. The trend in modern education, I believe, is to intermingle physical exercise with mental, and a deep concentration of mind, as I stated before, is possible for a short period of time only without special fatigue, and then there should follow a short period of exercise, and perhaps removal into another room, with opportunity to move all the muscles, and in that way draw the blood from the brain to the muscular system again and give a chance for an equilibrium to be established instead of concentration in the brain.

DR. TATE: We all recognize this as a very important subject, and I think we must all confess that we have paid too little attention to it all along, and now that we have Dr. Koenig with us, who has

made it a study, I believe I would take issue with him on one proposition he makes in connection with our institutions which have school and industrial work going on the whole day. If I understood the doctor he advocates a hearty breakfast. I think we all approve of that. Next he advocates a full noon-hour meal, and a light supper. Now, my belief is that the doctor is strictly right on the breakfast question, but I believe he is wrong on the noon meal and the supper proposition. I believe that we should of course give proper nourishment to our children at all times, but I believe further, in view of the fact that most of the large institutions have intellectual work in the afternoon, that that noon meal should not be the heavy meal of the day; we should give the children ample food to satisfy their appetites, but give them the heavy meal in the afternoon, say at six o'clock. Now, this seems to me to be a plain proposition. Two-thirds of our pupils in Minnesota, for instance, are in the school in the afternoon for some two hours and a half. You fill those children's stomachs with strong food, and you will soon find how much intellectual work you will get. On the other hand, if you satisfy their appetites with a comparatively light meal at noon you get about as good work out of those children intellectually in the afternoon as you did from the children which had their turn in the intellectual department in the forenoon. Now, this has been my experience. If I am wrong and if there is any matter to be criticised in what I have said, I would like to hear Dr. Koenig's opinion of it.

DR. KOENIG: I imagine we are probably both right and possibly both wrong. I fully agree that you will obtain better intellectual work in the afternoon if only a mild dinner is given. But what results? The child, by the time his supper hour arrives, is ravenous, you might say. Too much is eaten at the evening meal. In order to get a sufficient amount of sleep for a child, it is necessary that it retire probably at eight o'clock. That means sleep before the processes of digestion are finished. It means restless sleep that I have often observed personally, talking in the sleep, and tossing, and it means incomplete digestion. It has been said that the body when asleep is about sixteen per cent less alive than when awake, and consequently the digestive processes are supposed to suffer just to that extent. I fully agree with the gentleman with regard to an adult who does not go to bed until eleven or twelve o'clock, that to eat a hearty meal or dinner in the evening is all right, but as to children, I believe it to be distinctly harmful, small children especially. I have often noticed and have personal knowledge of the fact, as I presume

many of you also have, that, in the case of a child who eats a hearty supper and retires to bed two hours afterwards, especially if meat has been an ingredient of that supper, the sleep is liable to be restless, nightmare is liable to ensue, and other effects upon the nervous system are noted that can be prevented absolutely if a light supper is given. I believe it is better to allow a child to have good refreshing physiological sleep and reduce probably during the day the amount of intellectual work after the noon-day hour. It may be that I am rather one-sided in this matter, but if I may refer to myself again, I have often noticed the ill-effect of any heavy meal in the evening upon myself, where indigestion would result from such meals in the evening, over a long period of time. I make it a custom myself as nearly as possible to eat the best meal at noon; so that my statements are not so much theoretical as they are from personal experience.

DR. TATE: If the convention will indulge me with one more word, I should have said that it has been my custom for many years to provide a light lunch at 10:30 for all the pupils, preferably fruit. Then their appetite at noon is not ravenous at all. I should be pleased, if I could, to answer the argument made last by Dr. Koenig in reference to meat for small children. I suppose that none of us encourage our very small children in eating much meat at any time; that when they do feast upon that heavy diet, they have from two to three hours after their meals of romping and play and a good time before they retire. With our adult children, they have ample time after a heavy meal for digestion before the hours of sleep are indulged in; so that it seems to me that with all I have heard I am not convinced that we have not the best theory in this matter.

DR. CROUTER: The discussion at this point is very interesting, indeed very instructive, and I think very important. I am fully persuaded that in a great many of our schools we make mistakes in regard to the hours at which our pupils take their meals and the work required of them after the meal hour. Proceeding with our program, I would say that in the absence of the writer of the next paper, Mr. Johnson, Superintendent of the Indiana School, has very kindly consented to read a paper upon the subject of "Defects of Childhood."

MR. RICHARD O. JOHNSON: Mr. President, Fellow-members of the Association: We have been very much interested in the very instructive talk by Dr. Koenig, but there seems to be some question here as to the food supply. I want to say that I agree with the Doctor

some, and then some more! I believe that the morning meal should be the best meal of the day up until noon; and then, that luncheon should be the best meal up until evening; and then, that dinner should be the best meal up to breakfast, unless we throw in a midnight luncheon. I would rather take my chances with "sleeping digestion," or the partial death that he speaks of, and live!

The paper to follow by Miss Green is on the subject of physical training for deaf children. If we have one thought in life above all other thoughts, it is this one thought of the training of deaf children, and were we not interested in these subjects, and deeply interested, we have no business in this profession. Teaching is not a makeshift. I believe that anybody who goes into the teaching profession with an intention of making one or two years' study of it, and then dropping out for another purpose, even including marriage, makes a mistake. They should consider all these things in advance, and if they will not be allowed to teach as married women, and they want to be married, then they should take to some other calling. I say this with some emphasis because I believe that there is no higher or nobler calling than that of teaching. We are instructing the young boys and girls who are to come after us to assume the burden of this great world's affairs; and of all the children that are to be taught I cannot conceive of a greater duty and responsibility than falls upon us as teachers of deaf children.

That which I shall say to you this morning is general; it refers chiefly to the defects of general childhood, but what I shall say is also true of the deaf, and what I advocate for young children growing up can also be put into practice with the older children now in our schools. I intend to refer principally to operations—to surgery. Surgery in times past has been the great bugbear of the people. They have been afraid of it. But I know of no phase of scientific development that has made more rapid advancement than surgery has in the last fifteen years. It has become safe and efficient. In these operations, those upon children, we are dealing not only with the intellectual and the physical, but also with the moral and spiritual welfare of the child. My attention a few days ago was called to an article published in the western papers, very incomplete, referring to the so-called *new* movement in Philadelphia in which Dr. S. Weir Mitchell was concerned, where some society there was undertaking to perform operations upon delinquent children for their reformation. It is not altogether a new movement, and we do not have to draw our inspiration altogether from Phila-

delphia in such matters. But you are all acquainted with Dr. S. Weir Mitchell as an author, scientist and physician and surgeon, and his name in connection with this movement gives it great weight. Their idea has been to take these delinquent children and perform certain operations upon them, and the article that I saw referred to adenoid growths and defective eyesight. The newspaper reference, of course, was incomplete. They went further than that and performed operations upon the head, upon the skull, to remove undue pressure resulting from falls and things of that kind that are the daily lot of the child, and in very many cases effected a radical cure. This movement in Indianapolis has been under way for some time. They have established there a Board of Children's Guardians that has the right to go into a family and remove their children, whether the parents consent to it or not, simply for the reason that there are evil influences surrounding the education of that child. They take such a child, put it out where it can have the right kind of environment and that child is raised as a useful citizen of the state. In addition to that we have a Juvenile Court there, and it has, I will not say unlimited, but very wide powers in the disposal of children brought before its judge for truancy, delinquencies, etc. During the past year or two quite a number of operations upon delinquent children were performed, and not a single death has resulted until last Friday, when a boy was operated upon there for supposed pressure of the skull upon the brain. The boy seemed to be in perfectly good health, but he did not have sufficient vitality, as it turned out, to withstand the operation. That is the first death that has occurred there in this movement, in the various operations.

MR. BOOTH: Was this in your school—these operations?

MR. JOHNSON: Oh, no; this was in the city and among hearing children.

MR. LYONS: What success attended the other operations?

MR. JOHNSON: Good. A few days ago, when this reference was made in the papers, the editor of one sent a young gentleman out to interview me on the question and asked that I prepare something for a Sunday story. That has not been published as yet and I am going to read it here.

DR. TATE: Just preceding the reading of this story, while we are on the subject that is under discussion, I would like to know to what extent the matter of adenoids, obstructions in the throat, etc., has been investigated in our institutions and schools, and what per cent of operations have been performed. Many of those you know

produce deafness. I can say for Minnesota that we have had a number of operations of that kind, removal of adenoids, that have materially added to the good health of the pupils.

MR. JOHNSON: I am going right into that question. This paper deals largely with adenoid growths.

In the course of the reading of his paper, Mr. Johnson paused at intervals to make the following remarks: "I think every teacher of the deaf, whether oral or manual, should thoroughly understand this question of enlarged tonsils and adenoid growths and should be able to detect them at sight. As I shall say in a moment, the evil results following these things are very great and it is the teacher's duty to know her child-pupil and be able to take up these defects with the Superintendent so that he may take it up with the parents and remedy the defects. . . . If the faucial tonsil is not adherent to the faucial pillars, an expert specialist, by the use of the tonsillotome, will be able to remove probably both tonsils within sixty seconds; but if they are, if these tonsils are adherent to the faucial pillars, it will take more time to do it. Then an anesthetic will have to be used and it may take twelve, fifteen, or twenty minutes. It is a very bloody operation, but a safe one. A great many people have fear of the danger of anesthetics. There is a difference, of course, between chloroform and ether and the percentage of collapse that follows the use of ether is not as great as that which follows the use of chloroform. The cases are probably one in eight to ten thousand, perhaps greater, I have forgotten the figure, but the danger is very remote . . . Without having our attention called especially to such a picture as this 'adenoid face,' we would go along the streets and be struck by child after child and adult after adult who present these appearances and would not know what the trouble was, but those who have made a study of such defects would know what the trouble is or what it has been. It has been this adenoid growth that has been neglected; a crime has been committed against the child by its parents, or teacher, or somebody responsible for it; and I may go further, and say it is the crime of the state in this—that if the parent or others do not give attention to such deplorable condition, it is the duty of the state to step in and see that it is done. . . .

"As to the cause of adenoid growths, the definition I have given in my paper is about as clear a one as I have yet seen; I do not know what it means; in other words, it simply writes it down that the cause is obscure."

DEFECTS OF CHILDHOOD.[1]

RICHARD O. JOHNSON, INSTITUTION FOR THE DEAF, INDIANAPOLIS, IND.

In the daily papers of a few days ago was an account of Dr. S. Weir Mitchell and his connection with a "new" movement in Philadelphia for surgical operation upon so-called delinquent children for the purpose of their reformation, etc., and especial reference was made to adenoid growths (pharyngeal or tubal tonsils) and defective vision requiring surgical interference and treatment. Nothing was said concerning enlarged faucial tonsils and defective teeth, but surely they must have been considered by those in charge of such a praiseworthy movement. For a number of years these four defects have been pretty thoroughly discussed by specialists within and without the medical profession for their frequency, and consequent evil results, are truly alarming to those who know of their prevalence.

The average parent sees not much farther than his own family—and he sees not clearly his own. The inevitable results of these defects referred to may present themselves, it is true, but, while deplored, they are considered "natural and to be expected" in some way, and nothing is done for relief—therein lies the pity! The child may die from these defects (other causes assigned), very frequently does, but living, he suffers mentally, physically, and, quite often, morally, and, too often, the resultant "sin" is visited by unjust judgment and wicked punishment.

ENLARGED TONSILS.

Pharyngeal tonsils (adenoid growths), a spongy, blood-filled mass in the nasopharynx, and enlarged faucial tonsils tend to closure of the pharyngeal opening of the short eustachian tube (about one and one-half inches long) leading from the postnasal space to the middle ear cavity, thus preventing its proper ventilation and drainage. This causes abnormal atmospheric pressure upon the ear-drum from without, produces inflammation within the middle ear cavity, and the formation of pus for want of proper ventilation and drainage through the tube, resulting in abscess and puncture of the ear-drum, or escape into the inner ear, causing nerve deafness, and a long list of other complaints.

[1] This paper was prepared for the purpose of calling the attention of parents generally to certain remediable defects of childhood, and was not intended especially for those engaged in the work of educating the deaf. But being of interest to the latter, upon request the paper was read by Mr. Johnson at the Edgewood Park Meeting of the Association.—EDITOR.

This tonsillar enlargement is an important factor in disease, interfering decidedly with nasal, or proper and healthful, respiration, with the perfect mobility of the uvula and with perfect phonation. This enlargement commonly results in inflammation, tonsilitis, quinsy, rheumatism, etc., affects the general health, and through extension of inflammation to and partial closure of the eustachian tube leading to the ear, causes partial or total deafness. The claim has been made that tonsilitis is a localized form of rheumatism, that recurrent attacks thereof are due to germ infection of the faucial tonsils, and further that tuberculosis may be introduced into the system by germ action along the glands leading from the tonsils to the lungs. To say the least of it, this enlargement is an aggravating source of much discomfort, and excision most certainly will result in better health conditions and greater physical development, if nothing more.

Adenoid Growths—Symptoms and Evil Results.

Symptoms of adenoid growths are numerous and vary in different children, but the following are among the more frequent ones: Repeated colds in the head, periodical headache, difficult breathing, mouth-breathing, thick speech, hoarseness, difficult deglutition, inability to blow the nose, discharges from the nose and ear, cough, croup, tonsilitis, asthma, intermittent spells of deafness upon slight exposure, nervousness, mental dullness, night sweats, feverish conditions, frequent periods of malaise, epileptic seizures, and attacks of nausea, gagging, and vomiting, which are often attributed to digestive disturbances. Physically, the face is more or less deformed, the hard palate high arched, with irregular teeth, the nose sometimes improperly developed inside and out, the glands of the neck larger than normal, and the chest deformed. In nearly all cases of adenoid growths the faucial tonsils are enlarged, and it has been asserted that these enlarged tonsils are proof positive of adenoid growths without further examination. With these enlarged faucial tonsils are most likely thickened faucial pillars, to which the tonsils may adhere, thickened uvula, and enlarged follicles.

Slight adenoid tissue is probably natural to all children and soon disappears; it is the enlarged growth that causes trouble. Even this will disappear from the twelfth to the sixteenth year, but in the meantime irreparable damage has been done—the child has become a confirmed mouth-breather, the roof of the mouth is of high and irregular arch, interfering with correct articulation, the teeth are irregular, the voice is affected, the bones of the face have

assumed abnormal position, and the open mouth and vacant expression and lack of full mental and physical development present the "adenoid face" and a general picture of stupidity. Deafness of total or less degree may also be present, and generally it occurs.

It should be written in large letters that adenoids and tonsillar enlargement unattended to will result in disease, deafness, and impaired growth, both physical and mental, and the lack of moral stamina.

Cause and Remedy.

Investigation as to cause of this trouble does not lead to satisfactory results. "Adenoid condition," writes a well-known specialist, "is an excessive activity of the lymphoid tissue of the pharynx, at first normal, stimulated by constant irritation from particles of dust or secretions with mild infection; the rapidity and development of the growth being governed by the atmospheric, climatic, and constitutional conditions and by personal hygiene."

Whatever the cause, the evil results are certain and patent to all; but just as certain are the good results following surgical operation if taken in time—the child thrives and grows as never before, the stupid, vacant facial expression gradually disappears, nasal breathing restores a more normal physiognomy, and nature seems delighted at being rid of offending matter. If the hearing function has been affected, a change for the better occurs, in many cases with complete restoration of the hearing power. Whatever the cause, surgical interference is absolutely and always demanded of the parent, who should ever keep in mind this dictum of one who has had to do with thousands of adenoid cases: There is no condition or diathesis or disease which can abort the good, distort the beautiful, and prostitute the useful like the neglect of the adenoid condition; there is no medical or surgical transaction which will call forth more expression of gratitude and praise for the physician than this operation when successfully performed.

Diseases of the Ear.

It may be stated as a general proposition: Most ear diseases are caused by affections of the naso-pharynx, and a perfect hearing depends upon free ventilation of the middle ear. Investigation into the causes of mortality discloses the fact that a little over one-half of one per cent of deaths results from ear diseases—one in 180. It has been emphasized by a recent writer that there is a direct rela-

tionship between the ear and certain forms of epilepsy, gastro-enteritis, and many other diseases, and that many disturbances of health supposed to have their origin in brain, lungs, bowels, and other organs are caused by pent-up secretions of the middle ear. Chronic aural suppuration, he adds, is often symptomless, so far as the ear is concerned, and unsuspected, and cites the experience of Ponfick of Breslau, professor of pathology, who made an examination of the middle ears of 100 consecutive cases of infants dead under three years of age and who were supposed to have died of various diseases and among whom only nine had been supposed to have had any ear trouble showing rupture of the membrane or other external symptoms of ear disease. In these cases Ponfick found 168 diseased tympana, 77 ambilateral, and 14 unilateral. Evidence similar to that of Ponfick is given by Simmonds (Archives of Otology, October, 1898), who states that in 133 autopsies in nursing infants the middle ear was free from exudation in only five cases. Many of these infants above referred to would have become deaf and deaf-mute, no doubt, had they lived. How important, then, that there should be careful examination of the naso-pharynx, of the membrana tympani, and for middle ear inflammation, correct diagnosis, and prompt and efficient treatment by means of excision of enlarged faucial and pharyngeal tonsils and incision of the membrane for proper exudation if inflammation be found in all diseases of infancy and childhood. Proper attention and treatment will probably save the child's life and preserve its hearing and speech, for it is a fact that a child losing its hearing under seven years of age will almost surely lose its acquired language unless strenuous efforts be made to preserve it.

Deafness is General.

The prevalence of defective hearing among the pupils of our public schools is far greater than is generally known. Dr. Bryan, of the Indiana State University, reported in the Inland Educator some years ago the results of an examination of the hearing of twenty thousand public-school children, and stated that one investigator found two per cent of defectives, while eleven others found from 13 to 30 per cent of defectives. At the Minneapolis meeting of the National Educational Association (1902), it was stated that a large number of pupils in the public schools had defective hearing and were backward because of this defect; that the number having defective hearing probably outnumbered the total deaf-mute popula-

tion and were simply drifting along, their teachers not knowing what to do with them. At the Boston meeting of the Association (1903), an incomplete report upon this matter was made to the "Department of Special Education," showing that in the public schools of six cities an examination had been made of 57,072 pupils. Of this whole number, 2,067, or a little over three and one-half per cent, were found to have marked defective hearing. In the reports of this examination, minor defects were ignored and only the most pronounced cases included. The percentages ranged from 2.0 to 6.6, the former at Cleveland, Ohio, the latter at Utica, N. Y., where 406 pupils out of 6,113 were found who could hear only at a distance less than one-third the average distance for the class, and 399 additional not included in the percentage, who heard one-third to one-half the average distance. In Chicago an examination was made of 6,729 school children, 6.5 per cent of whom were found to have marked defect of hearing. Of the total number, however, 16 per cent were found to have defective hearing of greater or less degree, 6.5 per cent defective in both ears, and 9.5 per cent in either right or left ear. In Providence, R. I., it was reported that about 10 per cent of the pupils had defective hearing; that it was more common with boys than girls, and that adenoid growths were common. Adenoid growths and mouth-breathing were reported from nearly all places. In his report for 1900, Superintendent Southworth, of the Somerville, Mass., Schools, says:

"The subject of the hearing of school children is also beginning to receive the attention it deserves, and investigations in many places have tended to establish the following points:

"1. At least one child out of every five has some defect in one or both ears.

"2. In the majority of cases neither parent, teacher, nor child is aware of the defect.

"3. Children defective in hearing are usually counted careless, inattentive, or positively stupid by parents and teachers, who are ignorant of the real cause. Such children are often kept two or more years in the same grade, and, being the largest children, are not infrequently given seats in the rear of the room, where their chances of hearing are reduced to a minimum. This point is so important that it deserves special notice. Out of 961 children examined in two cities, 176 were found to have defective hearing, while only two out of the 176 were known to be deaf by their teachers.

"4. A child who is hard of hearing can hear better at certain times than at others. This fact often leads parents and teachers to

misjudge a child. The remark is often heard, 'Don't tell me Johnnie is deaf; he can hear as well as anybody when he wants to.' "

Defective Vision.

Along with this defective hearing of our public-school children comes defective vision for the consideration of parents, educators, and skilled specialists. It frequently happens that both ear and eye are affected by a common cause, for instance, exanthematous diseases. A partially deadened ear requires a sharp eye, defective sight a keen ear, as complements. Where both ear and eye indicate deficiency, the condition is a deplorable one, the more so when the defects are unrecognized and no examination made or treatment given which would remove or ameliorate in large degree either one or both defects. Out of 312 pupils in the Indiana State School for the Deaf who were examined last spring, eighty (25.6 per cent) were found with defective vision in greater or less degree. Of this number but eighteen were wearing glasses provided by parents; neither parents nor children were conscious of existing defect. Of the eighty with defective vision, twenty-nine were born deaf (69 per cent total deafness) and fifty-one suffered deafness through sickness and disease (51 per cent total deafness). Comparing the percentages of defective sight of those born deaf and of those losing hearing after birth, the latter is 1.3 per cent higher (24.8 — 26.1).

Defective vision causing suffering from headache, blurring, pain on studying at night, near-sightedness, defective color perception, etc., is as frequently overlooked by both teacher and pupil as is defective hearing. In a report made to the Boston meeting of the National Educational Association above referred to, an examination of 34,426 school children in five cities showed marked defective vision in 4,603, or nearly 13.5 per cent. The percentages ranged from 7.7 to 19.1, the former at Bayonne, N. J. (4,610 examined), the latter at Worcester, Mass. (11,953 examined). As with the deaf, minor defects were ignored and only the most pronounced cases included. In Providence, R. I., a report from the director of physical exercise showed that 25 per cent of the school population (25,000) had defective vision; that 40 per cent of this proportion wore glasses and were backward in studies because of poor sight; that Jewish, American, and Irish children in the order named are more prone to defective vision than other classes, and that Italian, Portuguese, Syrian, Armenian, and negro children are practically free therefrom.

The Normal Eye and Ear.

Upon examination many persons are found whose hearing and eyesight, one or both, are defective, yet they are almost indignant if any suggestion of this deficiency is made to them. The explanation of this is to be sought in the fact that among civilized surroundings the normal ear and the normal eye are rarely called upon to exert their functions to the fullest possible extent. It is therefore evident that a considerable amount of hearing or of sight can be lost without any corresponding appreciation of the fact. This loss, however, implies something more than subtraction from the working power of a single sense. That impairment of either the hearing or sight should be an inconvenience is readily understandable; that it can make so large a demand upon the nervous energy as to be a source of fatigue needs personal experience or observation for its full appreciation. Alarmingly large percentages of backward and feeble-minded children upon examination have been found to be afflicted with deformities of the eyes impairing vision, all of whom evidenced marked improvement, mentally and physically, when defects of sight had been corrected. In many instances insubordination, truancy, and viciousness have been successfully overcome by the prescription of correct glasses. Our reformatories, insane hospitals, and inebriate retreats invariably show large percentages of visual defects in the inmates, and probably the deformed eye transmitting to the brain distorted images has exerted a demoralizing influence upon the mentality.

Remedy for Deficiency.

I am convinced that a uniform and thorough examination of our public-school children throughout the country would disclose an alarmingly large proportion of pupils who lack the proper perception of speech-sound, who are practically deaf to certain elementary sounds, and to whom ordinarily modulated speech must seem in consequence a confused jumble or unintelligible mumbling. I am also certain that it would be found that defective eyesight is most prevalent and largely increasing. Without knowledge on the part of teacher and pupil of the latter's deficiency, the child stumbles on through the grades displaying that which is unjustly styled natural stupidity. The remedy for such a state of affairs is plain and simple. There should be a state law everywhere requiring an examination of the hearing and eyesight of all school children at least once in three years, as is now the law of the state of Connecti-

cut; there would then come about better knowledge of possibilities of prevention of ear and eye deficiency, proper treatment would be prescribed, and these most common evils reduced to a minimum—nervous exhaustion would be relieved, better health result, and greater educational progress made.

Decayed Teeth.

Another thing that few parents give heed to is decayed teeth, and yet these give rise to a long list of ailments. Decayed or decaying teeth are not only unsightly, a cause of foul breath, and the source of much excruciating pain, but a most prolific cause of digestive disorders leading to serious physical illness. When the pain of aching teeth in the child becomes too severe home remedies are administered for the symptom—the real cause of the ache is overlooked and nothing done therefor—and upon the temporary subsidence of the symptom (pain) the matter is dropped from mind until another outbreak from the same continuing cause; in the meantime, the degeneration of diseased teeth is constant, and in ninety-nine cases out of one hundred absolutely nothing is done to arrest the decay and for the preservation of the teeth. The aid of a dentist is not sought until too late; then, in too many cases, only for the purpose of extraction; and in this connection it may be well to add that, early or late, a tooth should never be extracted that dentistry may save.

Defects Through School Course

Professor Krauskopf, of the Chicago Child Study Laboratory, in two articles on sight and hearing in the Journal of Adolescence, shows that upon first entrance to school at six years of age 32 per cent of the children were found with defective sight and 26 per cent with defective hearing; that from this time there is a very rapid increase in the percentage of defectives until the ninth year, then as rapid a decrease until the thirteenth year, then again a slight rise, until at the close of the high school the percentage of defectives is about the same as upon entrance to school. "The great fact brought out by these Chicago investigations," writes Oscar Chrisman, Professor of Paidology, Ohio University, "is the very rapid increase of defective sight and hearing in the early school years of the child, which culminates not far from the ninth year. This is a remarkable time in the life of the child, for other troubles show strongest about this year. At this time the brain has about reached its full weight, and in its development is changing from increase in size to increase

in function. This is also the time of the greatest susceptibility to fatigue in the life of the child; for near this year there is a sudden growth, which is not shared by the heart, so that it does not keep pace in growth, while the extra strain on it causes dilation and great fatigue when exertion forces the heart to do more work than it can rightly accomplish. The maximum weight of the spleen in proportion to the body comes at this time, but just what that means is not determined. At this year, too, the child has yet about half of his temporary teeth remaining, most of which are in bad condition, thus preventing proper mastication of food, and frequently keeping the child from eating sufficient amount of food because of pain from the bad teeth. All these conditions lower the general tone of the child's system, and, with the adenoid and catarrhal growths and the various infectious diseases of childhood, act upon these two senses of sight and hearing so as to increase the bad condition which school work aggravates."

Duties of Parent or State.

With such facts as the above before them for guidance, it is the bounden duty of parents to give heed to their children's welfare by having the adenoid growth and the enlarged faucial tonsil removed as early as possible; to have the eyesight safeguarded by the prescription of correct glasses, and to have the teeth cared for in proper manner. Having brought the child into the world, the parents should be compelled by law to protect it against at least these few removable evils, to the end that sound minds and sound bodies shall combine for the good of both family and state. And if parents are unable or neglect to do these things, then the state itself should do so for its own protection. Just these things, among others, Dr. S. Weir Mitchell and those associated with him are doing for the so-called delinquent children of Philadelphia. Can any one doubt that children suffering from the evil results of one or more of the four defects named should frequently, yes, generally, be left behind in the race and, discouraged, become indifferent and acquire a tendency down the scale to delinquency and, perhaps, depravity? Surgical operation and special treatment upon delinquents is all right, but why not surgical operation and special treatment upon the growing child before the delinquent stage is reached? Let parents assume the responsibility which is theirs by the law of God, but should they fail in this through ignorance, negligence, or for any other reason, then let it be assumed by some one else—let not the child suffer and be condemned to follow the path of weaklings, when the cause is so easily removed.

DR. CROUTER: I would like to state that, valuable as these experiments referred to by Mr. Johnson may prove, they are to be received with a good deal of caution. I recall the case of a boy who was operated on by no less a man than Dr. Harrison Allen, who preceded the gentlemen mentioned by Mr. Johnson in experiments and operations for adenoid growths, and did a great deal of work in our institution. The case I refer to was presented by Dr. Allen at the time of the meeting of this Association at our school at Mount Airy, in 1896, and was one in which Dr. Allen promised complete recovery. The boy is as deaf today as he ever was. He will be deaf for the rest of his life. The only appreciable effect of the operation was an improvement in his physical condition, and I think that in the majority of cases this is the most that can be hoped for—an improvement in the general health of the child. Dr. Bliss has operated upon hundreds of pupils for us, and I do not recall that in any case there was any result other than an improvement in the physical condition and in the general health of the child.

DR. WESTERVELT: I would like to say that of several operations performed two years ago for the removal of adenoid growths two were so successful in the improvement of the hearing that the children went to hearing schools. There was some very slight improvement in the hearing of one or two other cases. Even where there is no improvement to the hearing it is sure to help the speech and to improve the child's general condition.

THE IMPORTANCE OF PHYSICAL TRAINING FOR THE DEAF.

GRACE G. GREEN, INSTITUTION FOR THE DEAF AND DUMB, MT. AIRY, PHILADELPHIA.

Viewing the deaf as a separate class—isolated as the laity are wont to believe—with no communication by means of sound with the outside world, how is it possible to conduct classes of deaf children in the gymnasium? Wherein do the methods of physical training for the deaf differ from those employed with hearing children?

To the outside observer it might seem that there should be instituted a system of physical training especially adapted to meet the requirements of the deaf. But we have sought no special system.

From the outset, it has been our endeavor to conduct classes in gymnastics as we would classes of hearing children. Our first and

foremost aim has been the development of the deaf child into as nearly a normal individual as possible.

Our second aim has been to lay particular stress on those points in which the deaf are especially lacking; and with these two aims we have ever kept in mind that physical education, like all education, is a training of the nervous system, and bears a direct relation to mind in that all mental action is dependent upon the nervous system and its blood supply. The best mental results can be obtained only when all physical aid had been rendered to the proper functioning of the nervous system.

Our method of conducting the exercises—and we make a special point of this—is by word of command. If a new exercise is to be taught, the command always prefaces the execution; a careful demonstration is made—the essential points being brought out by description; the command is then repeated to the class. Commands which include the word of preparation and the word of execution are always given with voice, that the expression and manner of the instructor may be absolutely natural. Here the deaf have an advantage over their more fortunate friends, for the eye serving the purpose of the ear develops keenly trained observers, and seldom, if ever, is it necessary to repeat a demonstration of a new exercise.

The question is often put, "Do you never give a gymnastic drill by imitation? What about the little ones who have no language?" To the very youngest pupils no formal drill is given; games and free play have proved of more benefit to these; but to the classes next youngest, whose language is limited, we repeat the command, promptly executing the movement, which the children imitate. This is done until the pupils have mastered the lip-reading, when the imitation is omitted altogether. In the intermediate and upper grades, where there is a better understanding of the language, the significance of the command is apprehended and its full import realized.

Imagine, if you can, a class of deaf children going through a set of exercises by imitating the movements of the teacher. She can impart no vigor or strength, pleasure or determination, as in the expression of a command (for the deaf child reads an expression in the face as a hearing child reads it in the voice), because her mind is bent on executing the movement correctly for the children to imitate; and the pupil follows mechanically, his attention focused on the teacher rather than on his own action, simply a ma-

chine following a machine. With the command, the pupil is master of his whole body, while he in turn is obedient to the teacher. It is his full volition in response to the teacher which creates the movement. Thus the pupil, in obeying the command, has a lesson in discipline; in willing that his body shall act in a certain prescribed direction, he has a lesson in volition.

But there are also restrictions employed in the execution of a movement, as, for instance, when we command, "With shoulder blades flat, arms forward, stretch!" The antagonistic muscles must inhibit the full excursion of the muscles willed to create the movement. Along with the impulse of volition is sent out an inhibitory impulse. Not only then is his power of volition but his power of inhibition brought into play. And with a nice adjustment of these acts of volition and inhibition co-ordinate action is developed. As we expect a ready response, the pupil must be alert, his mind cannot wander, his movements lag, for he is out of harmony with his class. And what do these acts of volition and inhibition, of obedience, and of alertness mean but the cultivation of the concentration of attention, and finally of self-control? With the deaf child commands mean even more. He naturally thinks in pictures and expresses his thoughts by gestures. His verbal memory is undeveloped. In interpreting the words of command from the lips he thinks in words and responds by definite action; thus, the language centers of the brain are afforded a much needed stimulus. As an aid to the cultivation of his memory and the practice of speech-reading at a distance, commands are invaluable. For the deaf, this method of conducting exercises serves a double educational purpose. This, indeed, is not merely bodily gymnastics—it is mental gymnastics. But I hear the criticism, "Is not this too great a strain on the child?" The answer to this criticism is found in the faces of the children. What measure of enjoyment or strain is indicated there? Just so much as is found expressed in the face of the teacher will be found in the faces of the children. She can make or destroy strain, impart indifference or enthusiasm. The class reflects the spirit of the teacher.

And, after all, what does systematic gymnastics mean? It is not mere physical exercise in general. Exercise alone is not training. Training comes through specific direction and methodical execution.

By this means of conducting classes there is a measure of repression; but, on the other hand, there is the fullest kind of directed

expression. Our aim is to develop both. Games of which we make large use and to which I shall refer later supplement the more formal gymnastics in allowing the greatest freedom of expression.

An important point, wherein we differ in our method of instruction, is the position of the teacher with reference to the class. In our own gymnasium we have had a platform erected one foot from the floor, and so constructed as to admit of ample freedom in the demonstration of an exercise. With the teacher thus placed just above the direct line of vision, each pupil is enabled to see the demonstration and also the teacher's lips without strain to his eyes, posture, or attention. With relief from the strain inevitably following where the position of the teacher is on the same plane as the class, comes a good carriage of the head, which could not be maintained with the conditions reversed.

And this is not a minor point, for a bad carriage of the head induces contracted chest and round shoulders, all of which are a menace to health. The deaf, as we who are associated with them know, come to us with weakened physical conditions, probably the result, in part at least, of disease, frequently in consequence of insufficient food, or, more properly, lack of nourishing food. As Dr. James Kerr Love, of Glasgow, says, when studying the physical characteristics of the deaf it should be remembered that these are drawn very largely from the poorer classes, and that during the whole of life they are by this defect handicapped in the struggle for existence. Deaf-mutes, therefore, die in a larger proportion than hearing people of those diseases the predisposing causes of which are bad feeding, poor housing, and insanitary conditions generally. Deaf-mutes, also for the same reason, cannot be expected to compare favorably with the hearing in the matter of longevity.

It is our endeavor, therefore, to counteract the influences and results caused by these conditions. In accomplishing this aim we must look to the diseases to which most of the deaf are prone.

Mouth-breathing we find is quite common among the deaf. The air which should be warm, moistened and filtered through the nasal passage enters at once in the respiratory tract in a dry, dusty condition, irritating to the delicate pulmonary membrane. This unfiltered air sets up chronic conditions of disease which spread to the eyes, ears, and lungs. Dr. E. Symes Thompson, consulting physician of the Hospital for Consumptives, Brompton, England, states that much of the high mortality among deaf-mutes is to be traced to chronic affection of the respiratory tract. Therefore one

of the salient points of our work, and one upon which we lay great emphasis, is the use of respiratory exercises. Full and free respiration is always insisted upon—not only during the so-called respiratory exercises, but in the apparatus and the more vigorous work as well. The benefit derived therefrom is not merely the ventilation of the lungs. Respiratory exercises aid in the return flow of the blood to the heart, and thus afford a relief to the heart at a time when it is apt to be overworked; they also increase the flow of lymph, not alone from the working organs, but from all organs of the body. Dr. Theodore Hough, of the Massachusetts Institute of Technology, says further that a good, steady lymph flow from an organ is an important condition of its healthy nutrition, and that the increase of lymph flow from all organs of the body, brought about through the increased respiratory movements, is one of the chief agents through which muscular exercise favorably affects the body as a whole. Then, too, with increased lung capacity comes greater power of endurance.

Another condition which marks the physical characteristics of the deaf is his lack of the use of speech. It seems to me that this is a condition not to be lightly passed by, but one which must necessarily affect the life of the deaf child. The hearing child who is laughing, singing, and shouting all day in his play is unconsciously giving to his lungs one of the most healthful exercises that can be practiced. The power of speech, writes Dr. Thompson, is a great incentive to the use of lungs. As the use of an organ increases its efficiency, so its efficiency increases the possibilities to resist disease.

Quite as essential to the Oralist's mind at least is the development of the respiratory organs in the acquiring of speech. The exercises in deep breathing, together with those of the arms, chest, abdomen, and lateral trunk, and the good position resultant therefrom, are most favorable to good tone production and control of respiration. The physical condition of the child unmistakably affects his quality of tone.

Without going further into details, one clearly sees the very great importance to the deaf of the use of respiratory exercise. Their real purpose is twofold: first, through the development of the lungs, the power to resist disease; and second, through development of the entire respiratory tract, the acquiring of better speech.

Since the first year after the introduction of physical training in our own school careful physical examinations of all pupils at-

tending the department have been made and records tabulated. In comparing our results with the observations made from hearing children, it is interesting to note that our girls at the age of sixteen, though they weigh two and three tenths pounds less, and are one and two tenths inches shorter than the physical type of hearing girls of the same age, yet their lung capacity is nine and three tenths (9 3/10) cubic inches greater. While the department of Physical Training does not lay claim to all the credit, for much has been done and is being done in the department of Articulation through the development of speech as above referred to, yet the records of the observations made the year of the introduction of physical training show that girls at the average age of sixteen were one and three tenths pounds less in weight, four-fifths of an inch only taller, and had a lung capacity of one hundred eighteen and three-tenths cubic inches, or twenty-one and three-tenths cubic inches less than girls of the same age now attending this department. Of course, the number of observations made at the time of the introduction of gymnastics is less than those made at the present time. Still we find that even among those of the highest records during the first year of training, while the weight and height remained the same, the lung capacity was eight and one-half cubic inches less. Though this is not conclusive scientific proof that gymnastics has been the means of increased lung capacity, at any rate it does show that the average lung capacity of the pupils is greater now than at the time of the introduction of physical training, eight years ago.

Improvements in other tests, not so vital, perhaps, to the deaf at least, as that of lung capacity, has also been marked, as is shown in our annual reports, accompanied also by improvement in health and morals, as indicated by the reports of the superintendent and physician.

How to correct the shuffling gait and poor carriage resulting therefrom is another question which we have had to meet. While we found the general "setting up" exercise, so to speak, improved the standing and sitting positions of the pupils, the correct pose in walking was not maintained. Therefore, much time has been devoted to marching, with emphasis placed not so much on the carriage of the head and shoulders as on the rhythm, length of stride, position of the feet, and, above all, the distribution of the body weight.

The pointing of the toes downward with the position of the foot almost straight forward, an easy walking stride with natural

walking rhythm, and the carrying of the body weight on the balls of the feet—these are always insisted upon, with the results that the dragging of the heels is eliminated, the step more elastic, and the general carriage much improved.

For developing a keener sense of rhythm, a shorter and quicker step is given; and to the deaf, for whom it is so difficult, even when starting in step to maintain the same rhythm throughout the marching evolutions, this is especially valuable.

Another means whereby we have endeavored to produce not only correct proportions of the body at rest, but a graceful carriage in locomotion, is the use of balance movements, wherein the weight of the body being supported by one or both feet, the equilibrium is maintained under the most difficult positions.

Balance movements demand the highest degree of co-ordinated action. The significance of these exercises is at once seen when it is remembered that "it is exactly this co-ordination which is of the greatest use in our daily life." That these exercises occupy a very important place in the training of the deaf is obvious when we realize it is this power of co-ordination in which the deaf are so lacking. It cannot be said that this lack of co-ordination is due primarily to deafness, I believe, but probably to the causes of deafness and to the results which deafness has produced—that is, to the weakened physical condition (mainly due to the unhealthy environment into which they are born), and also to the shuffling gait, both of which tend to create muscular tissue with little or no healthful and vigorous tone.

From casual observations made while conducting classes, it was noticed that there were pupils who more readily acquired the ability to sustain equilibrium in the balance exercises than others, while some with the greatest endeavor could sustain their equilibrium for only the shortest period of time, and some not at all. It seemed from these casual observations that the congenitally deaf had less difficulty in maintaining their equilibrium than the semi-mute. We determined, therefore, to make note of these observations. These were made from a class of seventy pupils from the Intermediate Department. Pupils were chosen from this department because of possessing a less cultivated sense of equilibrium than those of more advanced training.

From these seventy pupils, sixteen, who possessed sufficient hearing to be classed as semi-deaf, were excluded as bearing no direct relation to our calculations. Of those remaining, twenty-

seven were congenitally deaf and seventeen semi-mute. Of the twenty-seven congenitally deaf twenty could sustain equilibrium with little difficulty and seven could not; while of the seventeen semi-mute only two were able to keep in balance. It is also worthy to note that of the forty-four cases thirty-two were unable to maintain equilibrium.

The results of these observations corroborate the testimony of eminent physicians who have made a study of this subject. They also go to show that to a large extent the deaf are lacking in the power of co-ordination, and that balance exercises are, therefore, of great importance, inasmuch as by these balance exercises, the sense of equilibrium has been developed to a remarkable degree.

No well defined system of physical training is complete without the valuable adjunct of games and plays. Too much of formal gymnastics added to the already crowded curriculum induces additional fatigue, unless provided with the attractive elements encouraging the play instincts. No systematic training can replace spontaneous activity. Games and plays offer every means of expression, and are therefore a safeguard to over-repression, as they provide a relief to the fixed attention necessarily demanded of the deaf during school hours.

In studying the deaf child while at play we found that, like the hearing child, the youngest were engaged in those plays which largely involved imitation, such as playing mother, school, horse, etc.; the older boys, in those games embodying the spirit of co-operation and competition; while the older girls seemed almost devoid of the initiative, only occasionally playing such games as drop the handkerchief, and going through set figures of square dances. We have sought to introduce, especially for the youngest, games which involve contractions of large groups of muscles, inducing increased organic activity, at the same time offering opportunity for spontaneity and joyousness, and which eliminate voluntary effort, while they train in alertness, decision, and accuracy. However, we do not discourage the use of games of imitation, as they are most educative in the cultivation of imagination. With the older pupils, both boys and girls, we especially encourage those games in which the spirit of co-operation and competition is preeminent; games which offer the largest opportunity of developing self-control. Gymnastic games, writes Carl Betz, are a powerful help in moral training. There is, in fact, only one other means which can be used to advantage in moral training, and that is ex-

ample set by adults. As these examples are not always within the control of school authorities, there remains only play as a means for molding the character of the child. Good morals can only be acquired by right thinking, feeling, and acting; the evolution of these three rights is the object and end of educational play. No other one thing would so quickly and effectually raise the standard of our national sense of justice and honor as the introduction of directed plays in our public school system.

THE USE OF PICTURES IN ADVANCED GRADES.

HARRIS TAYLOR, SCHOOL FOR THE DEAF, DANVILLE, KY.

The use of pictures in the primary and intermediate grades of schools for the deaf is too general for discussion here. I think, however, that the value of pictures as an educational factor in advanced work is not always appreciated. The need of pictures became apparent to me soon after I entered into departmental work and was assigned the subjects of geography and history.

The text-book in geography has illustrations, but these are usually small, poorly engraved, badly printed, wrongly grouped, antiquated, selected in a haphazard way, and often of subjects most trivial. Frequently these pictures are misleading and some are utterly absurd. In a geography which I studied when a boy there was a picture of "The Pulque Man." This picturesque individual was sucking the juice out of the stem of a plant that resembled Texas "beargrass"—a plant, by the way, most barren of juice. On his back and hanging from his head was a bag which I thought was an essential part of the body of the man. I believed for several years that in some mysterious way the juice sucked into the man's mouth found final lodgment in the bag which grew on his back. In other words, I regarded "the pulque man" as a sort of human bee with the storage department on the outside. A few weeks ago I spent a half hour examining the pictures of an advanced geography. This geography is issued by one of the leading publishing firms of the United States. It is used extensively in schools for the hearing and I think in some schools for the deaf. If I had no corrective knowledge of the objects represented; if I had gained all my information of the objects from these pictures, I should be justified in believing:

That Mt. Hood and Yellowstone Falls are of the same vertical dimensions.

That one of the geysers of Yellowstone Park, when properly soaped, shoots out a stream of hot water which rises 19,401 feet above the local landscape.

That an Alaskan glacier is a dense forest.

That sagebrush is a variety of the century plant.

That a Dakota farm is a flock of sheep.

That the birch tree is a kind of sugar cane.

That a branch from the dwarf willow is ten times the size of the tree or shrub from which it is taken.

That breadfruit, poppy, lotus, and orchid flowers, men, tigers, and allspice are of the same size.

That thistles grow to the height of forty-one feet.

That tundras are mountains with glaciers between them.

That the spider is one-half the length of the whale.

That the giraffe has a front elevation of sixty feet.

That the lobster is one hundred and twenty feet long.

That gum arabic is a kind of horse chestnut.

That the excavations at Pompeii are carried on in the following manner: one man wields the pick to dig himself out of the mud, while one woman stirs water in a bowl and four others carry baskets of clothes on their heads.

I wish to deal gently with this geography—not a bad one as geographies go—and I shall find no fault with the native of Australia who is throwing a banana at a kangaroo. The look of reproach on the animal's face shows that the act is construed as unfriendly; but, since the weapon is clearly not a boomerang, the animal is not alarmed.

A careful study of this geography would have increased the list of absurdities very materially.

We know that verbal description is not sufficient when on unfamiliar ground. The local scenery does not furnish all that is desired in the way of land and water formations, animals and plants, habitations, and industries and products. Picture in many cases are the best aids and in some cases the only aids. What you want is rarely in the text-book. If it is, it may be so inaccurate that you wish it were not. Pictures are needed, many pictures, and for most of them you must rely on other sources than the text-book.

Pictures are of no less importance in teaching history. Pictures of historic persons, places, buildings, of weapons, defences, battles, dress, habitations, et cetera, help to illuminate the text, which is often none too clear under the most favorable conditions. Pictures

should not be used to take the place of thinking, but to give bases for more accurate thinking.

Pictures are used extensively in the advanced department of the Pennsylvania Institution, probably more extensively than in the advanced grades of any other school for the deaf.

The credit for beginning the collection of pictures for schoolroom use in the advanced department should be given, I think, to Mr. Edwin Stanley Thompson. Miss Grace L. Wright should receive most of the credit for the arrangement and classification.

Mounted on manilla cards, eight by ten inches, there are 7,000 or 8,000 pictures. One thousand or two thousand pictures are mounted on cards large enough for a full page illustration from Harper's or other weeklies. On still larger cards there are hundreds of double page illustrations from Harper's and similar publications. The magazines often contain excellent illustrated articles on travel and history. These are put away in stiff manilla envelopes of the same dimensions as the smallest cards. All these pictures and articles are indexed and filed where they are accessible at a moment's notice. All these mounted pictures and several thousand not yet mounted are intended for use in the departments of geography and history, but their use in language teaching is not to be ignored.

Old magazines, daily and weekly newspapers, souvenirs of various places, railroad booklets, advertisements, and worn out books are sources from which pictures may be obtained. The work of collecting, selecting, cutting, pasting, and indexing is not easy; on the other hand, the expense is not great. When people once learn that the institution can use old magazines and illustrated newspapers, they will be glad to give them to you. Some will believe that in donating the Century Magazine for 1888 they are supplying the teachers with much-needed reading matter. Let them think so. It affords them pleasure, and you get the magazines.

The same spirit that animates the collector of stamps, coins, or autographs will soon affect the teachers who begin the collection of pictures for schoolroom use. The zeal of the collector is theirs, and, once inspired by this zeal, they will find ways and means of collecting a large number of pictures.

I dislike to deal in so many personalities, but this paper would be incomplete without a few words about an unusual collection of lantern slides at the Pennsylvania Institution. Nearly all of these slides were made by Mr. Thompson, who is a great traveler and a

good photographer, and who is never so happy as when he is oozing information from every pore. The teacher of geography and the teacher of history can attest to the profit and delight the slides have afforded the pupils. One of the language teachers recently told me that she got more constructive language from the stereopticon entertainments than from any other source.

ARITHMETIC—THE EQUATION METHOD.

A. U. DOWNING, INSTITUTION FOR THE DEAF AND DUMB, EDGEWOOD PARK, PA.

The statement has been iterated and reiterated in various quarters that Arithmetic occupies in our school courses a position of exaggerated importance. This implies that it should hold very little rank in comparison with such studies as Geography, History, and Language. I cannot help thinking that such criticism is not justified by the facts. It is clear to my mind that these impressions come from insufficient study or a failure to comprehend the facts. Let us be magnanimous enough to accept the first named as the real reason.

One noted educator has said, "Properly conceived and presented, neither Geography nor History is a more effective mode of bringing home to the pupil the realities of the social environment in which he lives than Arithmetic." This assertion reveals the secret of it all. The expression "properly conceived and presented" gives us the key to the situation, enabling us to behold the fault and seek for a remedy. If Arithmetic has failed in the past to serve as a vehicle for original thought on the part of the pupil, the explanation of the failure is found in the fact that it has not been "properly conceived and presented." The trouble lies with the *teacher,* and not with the *science.* The remedy must therefore come from the schoolmaster who has failed to grasp the fundamental truths connected with the study. He must apply these truths to a method that will impart to the child mind the real usefulness of figures and numbers. *Method* is the important thing in all studies, as, indeed, it is in any well-ordered life, and *method* is equally indispensable in Arithmetic, which, Froebel says, "is the mediator between man and nature; between the inner and the outer world." Still, the value of any method of teaching is best determined by using it to accomplish a practical purpose. Any method, to meet requirements, must be made up of related facts, or it is not method at all. "Unrelated

facts are not knowledge," says one educator, "any more than the words of a dictionary are connected thoughts." The truth of this impressed itself on my mind after several years of schoolroom experience, and with study along that line I became fully convinced of it, and set about to prove it in my own experience. After a number of years, sufficient to permit both its strength and weakness to come to the surface; after amending here and perfecting there as experience proved desirable, a method has been adopted by which Arithmetic becomes a much more natural study, delightful to the pupil and satisfactory in a large degree to the teacher. The method concerns itself only with the manner of working problems in a rational way. My method has been called the equation method.

The merits of this method are many, but the main ones which mostly concern teachers are:

First. It is systematic. By it a pupil follows the natural process of his mind, and when he has solved the problem, he has done it by a systematic line of reasoning that can scarcely fail to produce the desired end. Step by step he moves through the various principles involved, and confidently he comes to the end.

Second. Oral explanation on the part of the pupil is wholly unnecessary. The finished work stands as a complete whole. Every principle is applied in its proper place; everything has its proper label. No time need be wasted in asking the pupil to explain this point or that. The method is a *time saver,* and teachers of the deaf appreciate the value of time-saving devices.

Third. The pupil's idea of values becomes clear. A false statement soon becomes apparent even to pupils of less than average intelligence. The equation method, it will be seen, corresponds to equations in algebra. It is a system of equalities, and, in fact, the sign of equality (=) is designed to be used in place of the complete language expression in higher classes in order to facilitate work. A false statement like this, "8 pecks make 1 quart," will be the means of stirring into activity even a sluggish mind.

Fourth. It provides numerous opportunities to impart correct language forms to the pupil's mind. Much of the language acquired by deaf boys and girls, comes in a mechanical way. Constant repetition, therefore, will fix difficult expressions in their minds. By this method they not only learn to write correct expressions, but that very desirable accomplishment, *change of form,* may be introduced to them in a most effective way. If this opportunity be made the most of by the teacher, especially in the intermediate

grades, a very distinct improvement in the use of language forms will result. The pupil learns to use correctly such difficult words as "cost," "pay," "buy," "sell," "worth," "value," and "price"; also "make," "contain," "compose," and many others that will readily occur to the mind of the experienced teacher as stumbling-blocks to the deaf. A more natural use of the passive voice, because not arbitrarily applied, is acquired, thus providing a welcome variation from a monotonous use of the active form. Also the pupil gets a clearer understanding of the use of the various forms of the verb *to be*.

Fifth. The method arouses and interests. The teacher should not be too hasty in leading the pupil into deeper water. At the beginning there should be much drill in the comparison of values, until the pupil understands the nature and purpose of the method. In a statement like this,

> James bought 12 oranges at 5 cents each. What did they cost?

the teacher first ascertains from the pupil whether "oranges," or "cents," are required in the answer. The pupil is then drawn out on the first statement in the equation. It readily becomes plain that "12 oranges" and "5 cents" do not represent equal values, but that "1 orange" and "5 cents" do. The statement would then read,

> 1 orange cost 5 cents.

The "5 cents" is placed last, because "cents" is required in the answer.

Sixth. It begets confidence, a trait so desirable and yet so rare. Problems that are difficult of solution when undertaken in other ways, become compartively easy by this method. The pupil's preliminary drill in comparison of values stands him in good stead now, for he has begun to understand how to reason his way through the solution step by step. He no longer depends on the teacher, but sees for himself, and understands. On his face is written in large letters the word CONFIDENCE. The recent final examination in my class contained problems in common fractions, decimal fractions, profit and loss, trade discount, simple interest, bank discount, and compound proportion. There was one boy who went through the long examination of four and a half hours with a look of supreme confidence. In grading his manuscript, I looked in vain for the smallest mistake or omission. Afterward, in discussing the matter with me, he told how greatly interested he had become in the ana-

lytical method, saying, "It makes things so plain." This boy had been schooled in the method for but two years, but he seemed to grasp the spirit of the thing from the beginning. Many other pupils have testified to the same effect as this boy, and say it removes doubt from their minds.

Seventh. The finished solution presents a much neater appearance and is much more easily traced than hap-hazard ones. In this connection it occurs to me that too many teachers grow lax in the matter of neatness, especially as the pupil nears the end of his school career. This is a mistake so serious that it may influence for ill the whole future life of the pupil. *Neatness* should be the daily watchword of every teacher, and carelessness should always be condemned. The pupil should be taught to know that nothing is "good enough" except the *very best* he can do. Think, too, what a valuable asset neat and careful habits are to a young man or woman on the threshold of active life.

The explanations I have endeavored to give are now to be indicated in a practical way, viz., by the use of actual problems. I shall confine this demonstration to problems involving operations in compound numbers, common and decimal fractions, profit and loss, interest, and compound proportion:

Problem (1).

At $\frac{1}{5}$ of a dollar per yard, how many yards of ribbon can be purchased for $\frac{5}{4}$ of a dollar?

Solution:

$\frac{1}{5}$ of a dollar is paid for 1 yard.
$\frac{5}{5}$ or a dollar is paid for 5×1 yard $= 5$ yards.

$\frac{5}{5}$ of a dollar is the same as $\frac{5}{4}$ of a dollar.

Then,

$\frac{4}{4}$ or a dollar is paid for 5 yards.
$\frac{1}{4}$ of a dollar is paid for 5 yd. $\div 4 = \frac{5}{4}$ yards.
$\frac{5}{4}$ of a dollar is paid for $3 \times \frac{5}{4}$ yd. $= 1\frac{5}{4}$ yd. or $3\frac{3}{4}$ yd.

Answer:

Three-fourths of a dollar will buy $3\frac{3}{4}$ yards of ribbon.

Problem (2).

Reduce 2 yd. 2 ft. 7 in. to inches.

Solution:

1 yard contains 3 feet.
2 yards contain 2×3 feet $= 6$ feet.

6 feet + 2 feet = 8 feet.

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1 foot contains 12 inches.
8 feet contain 8 × 12 in. = 96 inches.

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96 inches + 7 inches = 103 inches.

Answer:
2 yd. 2 ft. 7 in. contain 103 inches.

Problem (3).
A merchant's profit on a piece of cloth that cost $40 is 10%: for how much does he sell it?

Solution:
Cost. Profit. Selling Price.
100% + 10% = 110%.

Then,
100% is equal to $40.
1% is equal to $40 ÷ 100 = $ .40
100% is equal to 110 × $.40 = $44.00.

Answer:
He sells it for $44.00.

Problem (4).
A man gave .2 of his money to his son, .5 to his daughter and had $12.42 left. How much had he at first? How much did his son get? His daughter?

Solution:
He gave .2 of his money to his son.
He gave .5 of it to his daughter.

He gave .7 to both.

He had 1 at first.
He gave .7 to his children.

He had .3 of his money left, which is equal to $12.42.

Then,
.3 of his money was $12.42.
1 or his money was $12.42 ÷ .3 = $41.40.
.2 of his money was .2 × $41.40 = $8.28 Son.
.5 of his money was .5 × $41.40 = $20.70 Daughter.

.3)12.42
41.4

Answers:

He had $41.40 at first.
His son got $8.28.
His daughter got $20.70.

Problem (5).

Find the interest of $40 for 6 mo. 21 da. at 6 %.

Solution: [Observe this one is solved in abbreviated form.]

100 % = $40.
1 % = $ .40
6 % = $2.40 Int. for one year.

100)40.0(.4
400

12 months = $2.40
1 month = $ .20
6 months = $1.20 Int. for six months.

30 days = $ .20
1 day = $ .20/30
21 days = 21 × $ .20/30 = $4.20/30 or $ .14 Int. for 21 days.

$1.20 = Int. for 6 mo.
$ .14 = Int. for 21 da.
$1.34 = Int. for 6 mo. 21 da.

Answer:

The interest would be $1.34.

Problem (6).

If 180 men in 6 da. of 10 hr. each dig a trench 200 yd. long 3 yd. wide 2 yd. deep, in how many days can 100 men working 8 hours a day dig a trench 180 yd. long 4 yd. wide and 3 yd. deep?

Solution:

180 men can do the work in 6 da.
1 man can do it in 180 × 6 da. = 1080 da.
100 men can do it in 1080 da. ÷ 100 = 10.8 da.

By working 10 hr. a day it can be done in 10.8 da.
By working 1 hr. a day it can be done in 10 × 10.8 da. = 108 da.
By working 8 hr. a day it can be done in 108 da. ÷ 8 = 13.5 da.

A trench 200 yd. long can be dug in 13.5 da.
A trench 1 yd. long can be dug in 13.5 da. ÷ 200 = .0675 da.
A trench 180 yd. long can be dug in 180 × .0675 da. = 12.15 da.

.0675	200)13.5000(.0675
180	1200
54000	1500
675	1400
12.15	1000
	1000

A trench 3 yd. wide can be dug in 12.15 da.
A trench 1 yd. wide can be dug in 12.15 da. ÷ 3 = 4.05 da.
A trench 4 yd. wide can be dug in 4 × 4.05 da. = 16.2 da.

A trench 2 yd. deep can be dug in 16.2 da.
A trench 1 yd. deep can be dug in 16.2 da. ÷ 2 = 8.1 da.
A trench 3 yd. deep can be dug in 3 × 8.1 da. = 24.3 da.

Answer:
It will take them 24.3 days.

A few more thoughts seem to be suggested. The first thing to determine in solving a problem is the thing required in the answer, whether dollars, or men, or days, etc. Having ascertained this, the pupil must be impressed with the necessity of always placing the term required in the answer *on the right*. In some problems the same final term must be used in each equation, as in the one in compound proportion already given. In others the last term in the first and succeeding equations may not be the term required in the final answer, but lead up to it. The adjustment of this is a matter of detail that the teacher can apply in his own way. The teacher should *insist*, however, on the pupils giving the different numbers their proper names. The pupil may protest that this "is unnecessary," that he "understands it," and so on, which is only another way of confessing to the fact that he really doesn't feel sure when he attempts to do it. Here is afforded a rare chance for the teacher to demand *thoroughness of detail*, and he will make a mistake, yea, he will be guilty of *disregard of duty*, if he permit the chance to escape. I should even insist on having the words in the different statements or equations written out in full, at least until the pupil overcomes the habit, so common among the deaf, of using the singu-

lar and plural forms indiscriminately. The wise teacher will utilize any exercise that will aid in overcoming this habit, which is probably the most exasperating of all our trials in teaching language.

In conclusion I wish to say that the analytical method, as it has been used in my own class room work for a number of years, has proved the greatest aid to me in all kinds of problems. Naturally, then, I have become thoroughly convinced of its merits. As I have already said, it did not come to me in its present form in a day, nor a month, nor even a year; it came as the result of patient effort on the part of a teacher who was endeavoring to devise a scheme that would enable the pupils under his care to see things to the very bottom; to be able to see *the unit* in every arithmetical problem, and from that to build in such a way that they shall be able to think on their own account in the most difficult of all studies for a teacher to present properly, and yet the most fascinating of all when properly treated—Arithmetic. In the language of the patent medicine advertisement, "Try this method and you will use no other," for, after a thorough test, I am convinced that it will produce results at once satisfactory and delightful to every teacher who honestly applies it.

ADVANCED GEOGRAPHY—FEEDING THE WORLD.

EDWIN STANLEY THOMPSON, INSTITUTION FOR THE DEAF AND DUMB, MT. AIRY, PHILADELPHIA.

I have long thought it possible to arrange a course of study founded upon the things of our everyday life, and yet made to cover the arts and the sciences with a thoroughness sufficient for a high school course. In my sophomoric days I had an ambition to become a professor of Chemistry and I began to lay out a plan for presenting the subject with the dinner table as a basis. Being sidetracked from this and set to teaching the deaf, I am still of the opinion that a vast amount of language, arithmetic, natural science, some history, and nearly all geography may be taught in connection with the purely animal gratification of the senses, especially taste. We all know that the way to a man's heart is through his stomach, why should not the way to his intellect be found through the same channel? The following paper, while it in nowise tells how to do this, contains an array of interesting and curious facts which, when presented in connection with the various countries and products studied by the geography class, awaken an interest in what is very often a dry subject.

The wants of man are food, clothing, and shelter.

Shelter, or protection from heat and cold, rain and wind, is agreeable but not necessary.

Clothing varies with the climate from the heavy furs of the Eskimo to the "palm-oil and a few mosquitoes" that Henry Drummond says form the costume in tropical Africa.

But food man must have, and that, too, in goodly quantities, if he wishes to keep soul and body together and dwell in the land of the living rather than in the realm of shades.

The savage and half-civilized peoples of both the torrid and frigid zones, for the most part, find their food supplies close at hand and of a nature suited to the climate in which they live. The Eskimo has fish, seals, and delicious whale's blubber, and the pursuit of these gives him sufficient exercise to keep his blood in circulation and burn out the heavy fuel that he must use to maintain his body at the proper temperature. The indolent child of the tropics has but to stretch forth his hand and pluck the banana and the bread-fruit that grow beside his simple hut of palm leaves and form his staple diet. The teeming millions of southeastern Asia subsist upon a handful of rice a day.

Having thus summarily disposed of about three-fifths of the land surface of the globe and two-thirds of the population, there remain, as the "world" to be fed, only the civilized regions of the temperate zone in Europe and America. The former, while producing twice as much grain, vegetables, and fruit as the United States, cannot supply the wants of its own people, while the latter has not people enough to consume its immense crops.

The problem of feeding the world, then, naturally resolves itself into two parts, the production of food supplies and their transportation.

Some years ago a writer in The Outlook endeavored to show the real cost in labor and money of a simple dinner that might be served for seventy-five cents. He "estimated that the little dinner represented, directly or indirectly, the employment of five hundred millions of dollars of capital and of five millions of men." Not only were the fish, meat, and bread traced from the sea, the plain, and the prairie through their different stages of preparation and transportation to the table, but the spices and condiments were shown to have added no small part to the cost of the meal. We may consider the dash of pepper that we add to our soup or vegetables a very small thing, but it was to obtain that same dash of

pepper to give zest to the salted fish of the Lenten season that Da Gama and Diaz rounded the Cape of Good Hope and Columbus braved the terrors of the Western Ocean. It was the search for that same dash of pepper and the other, now common, spices that revealed the true form of the earth and laid the foundation of our modern ideas of geography and astronomy. Truly "great oaks from little acorns grow," and from the pepper-corn of the fifteenth century came the nebular hypothesis of the nineteenth. But let us return to our Outlook writer and see what he says about the pepper. "The pepper," he says, "came from ten thousand miles away. It grew upon a little bush about eight feet high, which must have had a growth of at least five years. The pepper was picked green; it had to be dried in the sun, and this meant employing women. It took one ship and . . . a railroad to bring the pepper to the United States." This is certainly much work for a little thing, and how much more work it must be to supply the world with the really necessary articles of food.

"Bread is the staff of life," while "bread and butter," as Ben Franklin added, "is a gold-headed cane." We will begin, then, with a consideration of the bread-stuffs of the world. These are for the most part flours or meals made from the seeds of the cereal grasses. Of these wheat stands first as the most widely distributed, the most costly and the most nutritious. It is chiefly used in Europe and Temperate America. It can be grown in all temperate countries and is also produced as a winter crop in some warm countries, like India, where the winter is like a Minnesota summer. That the United States leads the world in the production of wheat is due to its suitable climate and soil, the cheapness of its land, and the use of the best and most improved machinery in the production, handling, and transportation. Because of these conditions the United States produces one-fifth of all the wheat in the world and is the largest exporter. In Europe, Russia, Austria-Hungary, and the Balkan States are the only countries that produce enough wheat for themselves and to spare. The other countries draw upon them, India, Argentina, Australia, and the United States. France is one of the greatest grain growing countries of the world, one-fourth of the soil being given over to cereals, yet so great is the consumption of wheat bread that there is an annual import of more than thirty millions of bushels from Russia and America.

In 1871 there were in the world approximately 371,000,000 people whose principal food was wheat. In 1898 this number had

increased to 516,000,000. This great increase may be directly traced to the opening of great railways and canals. The Suez Canal opened the markets of Europe to the wheat of India, and from thus being made a greater exporter of wheat it was but a step to becoming a greater producer. Today India ranks fourth among the wheat producing countries of the world.

If the Russian farmers could make their land yield as abundantly as do the English they would have a crop from two to four times as large and would doubtless furnish the European market with most of its wheat. As it is, the export is about 95,000,000 bushels annually. The people of Russia consume very little of their wheat, preferring the cheaper and less nutritious rye. This selling of the more valuable and using a cheaper grain is perhaps most noticeable in Japan. Japanese rice ranks among the finest in the world, and the thrifty little "Yankees of the East" export their native product and import an inferior article for their own use. This thriftiness is only equalled by the farmers of our own country who send all their fresh vegetables to the city market and then feed their city boarders on canned goods.

Rice stands next to wheat as the most important food grain. It forms the staple food of nearly one-half of the people of the world, and while deficient in nutrition, it has filling qualities possessed by no other cereal. The proverbial handful of rice upon which the "heathen Chinee" is supposed to live is measured before, not after, cooking. You have doubtless all heard of the young wife who put a pound of rice to boil in a small kettle; it was soon "swellin' wisibly" and overflowing its narrow confines. Another kettle was quickly brought out and half the rice placed therein. This was but a partial relief and soon there were two overflowing kettles instead of one. Two other kettles were brought into requisition and before an hour had elapsed the range was covered with pots and kettles full of snowy rice.

Rice culture in the United States has been carried so far that our South Atlantic and Gulf States now produce about one-half of what the nation consumes. Rice grows also on the Lombardy plain in Northern Italy, and risotto is there as common as macaroni.

We are so accustomed to think of wheat as our principal cereal food that we lose sight of the fact that corn is the greatest cereal crop of the United States. Three-fourths of the world's supply are grown in this country. Europeans care but little for it as a food, but whenever there is a famine in Russia, Ireland, or India, the

United States contributes a shipload of corn, thinking that the taste for this grain acquired by a starving people will open a future market. The principal use of corn is in the fattening of hogs and other food animals. In the form of pork it becomes one of the chief exports of the country. It was this disguised form of corn that gave rise to one of our common colloquial expressions. The statement had been made in Congress, in 1828, by Andrew Stewart, that Ohio, Indiana, and Kentucky sent their haystacks and cornfields to New York and Philadelphia for sale, when one Wickliffe, of Kentucky, called the speaker to order, saying that those states did not send their corn fields and haystacks away for sale. "Well, what do you send?" "We send cattle, horses, mules, and hogs." "Very well; what makes your cattle, horses, mules, and hogs? You feed your hay to a horse, and then you get on top of the haystack and ride off to market. How is it with your cattle? You make them carry your grass to the eastern market. How much corn does it take to fatten a hog?" "Why thirty bushels." "Then you put thirty bushels of corn into a hog and make it walk off to the eastern market." At this point Wickliffe sprang to his feet crying out, "Mr. Speaker, I acknowledge the corn."

In our consideration of cereal foods, it would be unfair to pass without mention that which Dr. Johnson said was the food of horses in England and men in Scotland. "But," inquired a canny Scot, "where can you find better horses than in England, or men than in Scotland?" Was it to improve the men of this country that oatmeal became a few years since the almost universal breakfast food of the American child? What a relief to some of us at least are the more recently exploited products of Battle Creek and Niagara Falls.

Millet and barley are among the less common cereals.

Whether or not sugar is a food we will leave to the discussion of those who have the arrangement of the rations of the armies of the world. The fact remains that in the consumption of sugar the United States leads the world with sixty pounds annually to the credit of every man, woman, and child. All the wheat that we send abroad does not pay for the sugar that we import. In 1890 the candy manufactured in this country was valued at $150,000,000, or more than the combined output of England, France, and Germany. The United States is the only leading nation of the world that uses more cane than beet sugar. The proportion of beet to cane in the total product is as two to one. During the past fifty years the sugar

producing areas of the world have shifted from the torrid to the temperate zones.

Tea and coffee are not foods in the usually accepted sense, but they are so commonly used with foods that we cannot pass them by unnoticed. The United Kingdom leads the world in the use of tea, nearly one-half of the export tea going to that tight little isle. Six pounds a year is the allowance for each person. But the Colonies exceed the mother country in per capita use, Australia averages 7.81 pounds (Western Australia rising as high as 10 pounds). The United States averages but a little over one pound, while Russia, noted the world over as a tea-drinking country, consumes less than a pound. The English prefer the black tea and buy from British India and Ceylon; Americans use more green tea and get it from Japan.

While the American people may not be lying awake nights as the result of excessive tea drinking, they are rapidly killing themselves, if we are to believe the terrifying tales and horrible pictures that emanate from Battle Creek, by the use of coffee. Ten pounds per head is the average. This may be called by fancy names, Java, Mocha, etc., but it comes for the most part from Brazil or some other South American country or the West Indies. The Island of Porto Rico alone produces more than Java.

As a food, a confection and a beverage cocoa and chocolate hold a high position. The cocoa tree grows in the more tropical parts of America. Coffee requires less heat and flourishes in the sub-tropical regions, while tea is a native of the warmer parts of the temperate zone. The tea raising experiment in South Carolina is said to have resulted in a crop for 1906 of twelve thousand pounds.

Fruits, both fresh and dried, enter largely into the international commerce necessary for feeding the world, but root crops and garden truck have very little part in it except the early onions and potatoes from Bermuda and the occasional importation of potatoes from Belgium or onions from Egypt to make good some deficiency in the home crop.

The roast beef of Old England has long been the boast of that country and its delicious chops are a pleasant recollection to all tourists, but as the number of sheep in the United Kingdom is less than one per capita and of cattle less than one to every three it is evident that the meat supply must come largely from abroad, Australia, Argentina, and especially the United States.

The United States raises twice as many cattle as any other country except India, and they are nearly all fattened for food or kept for dairy use. In India, however, religious prejudice being against the use of flesh foods, the cattle are raised for draft and for their hides. In South Africa and Southern Russia, also, cattle are raised principally for their hides and tallow, and the same was formerly true in Argentina, the meat being thrown away until 1882 when the process of freezing the meat was introduced and its export began. Frozen meat, especially mutton, is sent to England from Australia. So carefully is the meat unfrozen that even good judges are deceived into believing that it is freshly killed. The difficulties in the way of transporting live cattle through the tropics leave the European market for animals on the hoof almost entirely to the United States, and from our ports great ships loaded with cattle sail every week. The United Kingdom consumes over two million tons of meat annually or about one hundred and twenty pounds to every man, woman, and child.

As already stated a large part of the corn crop of the United States is turned into hog products and in that form is exported. Our country raises about one-third of the world's hogs.

Most of our dairy products are consumed at home; little Denmark exports three times as much butter and cheese as the United States. Canada leads the world as an exporter of cheese, sending about four-fifths of the product of its three thousand factories to England alone.

Russia and Austria together supply about three or four million eggs a year, a large part of which go to the United Kingdom, the largest importer, whose people use nearly forty per cent of the whole world's supply drawn from twenty different countries.

The requirements of the Roman Catholic faith have made the supplying of fish to Southern Europe and Latin America an industry of considerable magnitude. The coast waters of Italy teem with fish, but the catch does not begin to satisfy the wants of the people, so dried stock-fish from Norway and herring from England are imported in vast quantities. Of all fish the cod is the most important commercially, and Newfoundland, Canada, and Norway export it salted to the Mediterranean countries and the West Indies. The largest fish export of the United States is canned salmon. This finds its way to every quarter of the globe, and not infrequently our fresh salmon, frozen on the Pacific coast, graces the dinner tables of European capitals. Owing to our tariff charges on pre-

pared fish foods, the herring catch of New Brunswick is landed at Eastport, Maine, where forty factories convert these plebeian fish into sardines and pack them in French labeled boxes to deceive the buyer and make him believe that he has the genuine article from France.

It is interesting to note that the rivers of France that have been depleted by the demands of religion are being restocked with fry from America. It is to be hoped that this experiment will prove more successful than the introduction of German carp into American waters.

It would be a pleasing task to take up almost any one of the staple foods and trace its origin, development, methods of production, preparation, and transportation, but enough has been said to show how man, as he advances in civilization, demands a greater variety of food and how he draws not only on his immediate neighborhood but the whole world to supply his wants, giving employment to millions of men in the production and transportation of the necessities and luxuries of life.

Very few, if any, of the great nations of Europe can feed themselves. One-third of the total imports of Great Britain consists of food stuffs, while the United States, with but one-fourth of its arable land under cultivation, has five million farms and holds first place as an agricultural nation. If Europe should refuse to buy from us she would lose three-fifths of her bread and one-half of her meat. The great powers know too well on which side their bread is buttered, and are going to think twice before they break with the nation that is such a factor in the feeding of the world.

What has here been done with food stuffs might also be applied to the materials of clothing and shelter. In such a treatment of geography we may divide the occupations of mankind into,

(1.) Those that secure raw materials.

(2.) Those that adapt these raw materials to man's use, and,

(3.) Those that transport the raw materials and the finished products, for, as Herbert Spencer says, "Leaving out some very small classes, what are all men employed in? They are employed in the production, preparation, and distribution of commodities."

NORMAL TRAINING FOR ORAL TEACHERS OF THE DEAF.

F. W. BOOTH, WASHINGTON, D. C.

Little more than a generation has passed since methods of professional training were such that it was obtainable only in the kind and measure that it could be given by one person to another. The young law student read law in the office of some local practicing attorney; the medical student read medicine in the office of the family physician; the candidate for the ministry studied theology in his pastor's study. There was, in the nature of things, but little teaching, little training by this system, for the nominal preceptors and guides, busy with their professional work, in strenuous effort to make a livelihood, had little time to teach and even less time to study and prepare themselves for teaching. That the results of the system, or the lack of system, were as good as they were, meeting fairly well the requirements, at least of the times, was due, perhaps, to the fact that by it, by its very shortcomings indeed, only the fittest, or those specially endowed, survived its disadvantages and discouragements and were able to bring themselves through the unmarked wildernesses of reading and study to the goal of actual entrance upon a professional career. Age and experience brought wisdom and skill, it is true, but at a cost that must be counted extravagant, for their full attainment invariably found the professional lifetime half or three-quarters spent. A crude, slow, wasteful system it was, but it went fittingly with the other slowgoing, time and strength consuming processes of its day, the day of the stage coach and the canal boat, of the sickle and the flail, and of home-spun, home-woven clothing. In the solidarity of social, business, and industrial practices, they all went together, and naturally, they all passed away together. But what has come in their stead? The answer may be given in a word—the factory, the factory principle and system in everything. What the factory system has done for mankind, in the easy, quick, and multiplied production of material things and comforts, the principle, in practical applications of it, has done for men in providing professional training in large and complete measure, of high order, and at the cost of but an insignificant portion of the professional lifetime. The principle finding expression in law schools, medical colleges, theological seminaries, and institutes of technology, with departments and sub-departments for every art practiced or science studied, gives us,

in every generation in its turn, young men, so trained and equipped for their life-work that they enter upon it at top speed and with full momentum, ready to do superior work from the very start in their professional career. Necessarily, the economies conserved for society at large, and for the individual practioner as well, are enormous. It is no longer necessary to be old to be wise. The young doctor, for example, has, at the threshold of his business career, knowledge, skill, and even experience, gained in laboratories, in clinics, and in his post-graduate course in a general or special hospital, that his grandsires not only did not have, but they could not have acquired had they lived their slow-going professional lives twice or thrice over. It is, indeed, the day and age of the young man, for he is found at the front and at the top in practically all professions and occupations where preliminary study and training can be applied to his early, complete, and superior equipment for their pursuit.

But what of pedagogy as a profession, and of the training afforded for it? Has it, too, come under the full dominance of the spirit of the age? The normal schools and teachers' colleges, amply supplemented by summer school courses for post-graduate work, though creations practically of the present generation, are in themselves and in their prolific and superior output, our sufficient answer. Within two decades, three at most, pedagogy has risen to the rank and dignities of a profession, and training for it is become the doorway to it in every grade and department of it from the kindergarten to the university. Fortunate indeed are our children in their generation, for school opportunities and privileges and a quality of teaching are theirs that their parents neither knew nor dreamed of.

But while the principle of provision of ample and thorough training for the profession of pedagogy is today generally recognized as the highest wisdom, it has had practical and general application in educational fields only in that part where the work is easiest, namely, in and for the schools for children who hear and speak. Our own work of educating children, doubly, trebly difficult because attended by the handicap in them of deafness and dumbness, has, as yet, experienced only a partial, restricted application of the principle. It is within the recollection of us older teachers when the saying that every new teacher spoiled at least his first two classes, was accepted not only as a truism, but as a truism in accord with the very nature of things. Spoiling two or three

classes was accepted as the way to learn to teach, and the only way at a time, moreover, when the work of the education of the deaf was restricted to the narrowest bounds, aiming at no more than to give a command of written language and an elemental knowledge of the most elementary subjects of school study. It was not, let it here be noted, until our special pedagogy became inspired of a new ambition; until it took upon itself a new responsibility and labor; *until, indeed, it broadened* to include in the benefits that it conferred the giving of speech to the dumb and ability to read speech on the lips to the deaf, that the old order of things gave place to the new and training for the work was recognized as a necessity for its successful prosecution. It seems to have been accepted in the start that this newer work was too difficult, that the principles underlying it and permeating it were too obscure, for their mastery by independent study and effort and merely through experience as gained in the instruction of individuals or classes.

But, as I have said, while our pedagogy has, from the beginning, recognized training for oral teaching as an imperative necessity, the work has in reality enjoyed the benefits of but a partial, restricted, and, over much of its area, I may say, a superficial application of the principle in the actual training work attempted and accomplished. We have fashioned our training methods largely upon the old-time law office, doctor's office plan, making training available in that kind and measure such as one teacher has been able to give to another. This individual instruction, as given, was necessarily of brief duration, covering usually a period of a few weeks, rarely more than three months, with lessons of an hour or so daily, and exhaustive—if so in any sense—only as relative to the resources and ability of the instructor giving it. And the teacher so trained, going forth with her meager equipment into some trackless wilderness of manualism, there to blaze the way and to do doughty pioneer work for oralism, not infrequently became herself a trainer, and so the work was handed on, from teacher to teacher, to become, as it may well be conceived, in its later stages pretty well exhausted of the good qualities it may have at one time possessed.

It may be said that the method of teacher to teacher training was born of necessity, therefore, that it has necessity for its excuse and justification. Indeed, there is little doubt of this, for the very rapid growth of the oral work in our schools in recent years has compelled the practice of the method in order to meet the demands in any adequate measure for training and for trained teachers otherwise for the greater part unobtainable.

But has not the work, now grown so great, outgrown this old, slowgoing, and altogether inadequate method of training? Has not our pedagogy reached a stage in its development to require advancement on this line of the professional training afforded for it, to bring it upon a level, in its aims, breadth, and scope, and in all provisions for it, with the training afforded for other professions, and indeed, for the profession of pedagogy itself to the extent that it embraces and covers the work of the instruction of normal children? Shall we not, must we not, have for our profession all the advantages in training and all the advancement in it that the professions of law, medicine, and theology, not to name others, are enjoying in the thorough courses provided in their training schools and colleges, and thereby have our teachers, at the very entrance upon their life work, accredited masters of it, and equipped, so far as training can equip them, for the doing of highly successful work from the start? I can imagine no answer in the thought of anyone that is not affirmative to all these questions.

Nor would I overlook the fact, but call especial attention to it at this point, that we have had training work, and have had it for years, of the highest order and effective to a most satisfactory degree; but unfortunately, it has been a restricted work, restricted by force of uncontrollable circumstances, to narrow limits and a meager output. "A little leaven leaveneth the whole lump." That is a true saying, for it is scriptural; and it is quite as true in its non-scriptural as in its scriptural applications. But it is necessary that even with leaven, proportions should be maintained, for there is such a thing as a little leaven being too little, or the mass to be leavened too great, for the work required to be accomplished. So, while we have had most excellent training schools, with prolonged and thorough courses, conducted under competent auspices and environed by favorable conditions for their successful work, their output has been too insignificant from the numerical standpoint to have appreciable effect, except in spots, upon the great body of teachers and the work done by them. But while this little leaven has had but an inappreciable effect upon the great mass of the work of the profession, it has had effect, and profound effect, upon the thought of it, and the training done, limited though it has been, has had widespread recognition and appreciation. The judgment of the profession is, I may say, wholly in its favor, as it is wholly condemnatory of the training work that has been heretofore accepted as but a compulsory choice of evils. There is every indica-

tion of this state of the thought of the profession, and abundant evidence that our work is, because of it, today on the threshold of a movement destined to completely revolutionize our training work and to bring it all, in every part of it, under normal school and training college direction and control. This revolution accomplished, the time will have arrived, and speed the day, when it will be as much an impossibility for a teacher to gain entrance to our profession without a certificate in hand of graduation from an accredited normal school, as for a doctor to practice his profession without a diploma from a chartered medical college. What this will mean as interpreted in its effects upon the work, it would be hard to predict except in general terms. But imagine it for a moment, every teacher and every superintendent a normal graduate of our best school, or one of our best schools, for training, and familiar, by actual contact with it and prolonged study of it in a model school, with the best work that the art of teaching can accomplish.

We are what we know and think, and we know and think, in much the greater part, what we have seen and experienced; therefore the importance, in normal training work, of experience with successful work in actual, continuous contact with it and participation in it. Without this experience, normal training is but a theory, an academic thing, of the books and of the ear. As well a medical college without its laboratory, its clinic, and its hospital, as well go back to the books of the doctor's office and be content with what they teach, as a training school without a model primary school as its forceful and effective object lesson. Therefore, I say, let our schools for training teachers be established and maintained at the seats of successful primary schools, and there only, and successful, moreover, in that measure that they are known to do *superior work* with children of every grade of ability with which our schools have to deal.

Superior work has, everywhere, in every field, inherent power to teach its own lessons, power tremendously forceful in its effects upon the student of the work. Doubly strong, then, is that training school, doubly effective is its curriculum, where it centers about a model school with all the self-teaching lessons operative that its superior work presents. No training school for teachers has a right, nor will ever have a right, to existence, and to promulgate and to propagate its methods, where those methods do not *prove themselves,* and, in great measure, teach themselves, thus through and by *superior* model school work.

Necessarily, the method employed and inculcated in our training school, the method illustrated in all its operations in the work of the model school in immediate association with it, will be the oral method, as this method, as practiced in our best schools, is at once the broadest in its scope and the most economical in its workings of all the methods of educating the deaf practiced, its breadth and economy being evidenced in the fact that it includes everything of universally acknowledged value, and excludes everything of uncertain or doubtful value.

I feel very sure that the problem before us, as such, is one fully and clearly understood in its component parts and conditions; there is little or no trouble on that score. And we all know how to solve the problem in theory. The trouble is not one of knowing, but of doing; it is a problem of ways and means purely, of physical and material things, to be wisely used and skilfully shaped to our purposes.

I need not here recount recent history, but only stop to say that the events of that history have been such as to enable the American Association to Promote the Teaching of Speech to the Deaf, as an organization and an agency for doing things needing doing in the line of its special activity, to take this problem in hand with the definite aim and purpose to give it a concrete solution, a solution such that, once accomplished, the problem shall disappear, together with all its professional vexations, not, it may be assumed, to appear again forever.

The establishment of a normal school at Northampton, or the enlargement of that school rather, is the initiatory move taken in this solution, for this enlargement is to multiply by two, and, it is hoped, later by four or five, the material output of that school, thus to a corresponding ratio enlarging its leavening power even to the making possible the leavening in due time, verily, of the whole lump. But I would not imply, nor be understood to imply, that leavening power and virtue are thought local to this single school and to be limited to it. But it is felt that this special activity put forth must be localized, must be limited, must be concentrated, in order to be safely and surely effective of immediate ends, and of other and remoter ends also, in view. To dissipate or scatter energy is usually to waste it, or at any rate to greatly weaken it in its effects. Centralization means power, for it conserves power and makes possible its economical administering to the securing of the largest and best in desired and aimed at results at the smallest relative cost.

The profession at large and as a body is becoming educated upon this question of training, and necessarily is becoming more and more discriminating, hence more and more exacting. I have said, we are what we know and think. I may add, we are *educated* as we know, think, and *appreciate*. The profession then is educated on this matter of training of teachers just to the extent that it appreciates training and values it. How far has its education proceeded? Surely it has left the kindergarten stages of it behind; it has gone beyond the acceptance of the crude, primary, train-you-while-you-wait, teacher-to-teacher system, and has advanced to a grade of appreciation, a grade of education, to demand, now, a system better and far more effective of its purpose. Call our present stage the intermediate stage in the education of the profession, if you will. The term will serve, for it suggests something beyond, and there is certainly much beyond.

I have no disposition to indulge in prophecy; yet, I cannot help the expression of a hope that the progress of the profession in its education on this subject of training of teachers will go right on indefinitely, to arrive at that stage soon when there will be no training, absolutely none, in any degree approved, much less accepted, that is not of the Normal School or Teachers' College order and grade. Then, and not till then, be assured, will our system of training be on a par with that enjoyed in the hearing school work; and we can not, we must not, be satisfied with anything short of this parity, with anything of less worth and effectiveness for the great, difficult, and rapidly growing work that rests upon us, and for the well-doing of which we are, according to our gifts and our opportunities, to be held at the last great accounting strictly responsible.

MR. JONES: Inasmuch as my paper immediately follows the paper of Mr. Booth, I want to make a little explanation. While my paper emphasizes the other extreme somewhat, in the preparation of a teacher in one particular case, I do not want to be understood as being even in the very least opposed to the broad grounds of preparation that Mr. Booth has taken. I did not know that my paper was to follow his.

THE EDUCATION OF THE DEAF-BLIND WITH SPECIAL REFERENCE TO LESLIE F. OREN.

J. W. JONES, INSTITUTION FOR THE DEAF AND DUMB, COLUMBUS, OHIO.

To the casual observer the education of a deaf-blind pupil is a great undertaking, a Herculean task, almost an impossibility; a

work requiring the most careful preparation of a teacher after nature has endowed her with unlimited patience and unswerving perseverance. But in reality this is not so. The same great principles that underlie the education of children in general apply with equal force to the education of the deaf-blind. It is true that much depends upon the teacher and the teaching; but so it does in the education of the hearing and seeing child. It is also true that the deaf-blind child left without instruction will be in a worse condition proportionately than the normal child, for the latter will learn much from hearing and observation, being in the primary school of nature all the time, and learning all of the lessons taught there, talking, playing, working, and turning these to its own advantage in natural obedience to the great law of self-preservation. The deaf-blind learns but little from the school of nature until kind hands lead it to see and feel, and know through the finger tips. It, therefore, is in the greater need of instruction and needs it all the time. But the successful teacher of hearing children will, after she has learned the manual alphabet, which requires but a few hours, have no more trouble in teaching the deaf-blind than she had in her school of normal children. No more patience, nor tact, nor skill are required, and in fact, not so much as the element of discipline is eliminated and the work is reduced to preparation and instruction. Likewise the poor teacher of normal children will find her work a failure in the new field of the deaf-blind. While, as we have indicated, much depends upon the teacher, great results do not depend upon her entirely. The mentality of the pupil must be taken into consideration. The strongest teacher will fall short of astounding results if her pupil is dull and sluggish in intellect. The ideal school is the strong teacher and bright pupil. This has been illustrated by Laura Bridgman, Helen Keller, Oren Benson, Tommy Stringer, Lottie Sullivan, and Leslie Oren, and their respective teachers.

There are two classes of deaf-blind which we wish to consider. Those who lost their hearing and speech before they acquired language and those who had acquired language before they lost their hearing and sight. The instruction of the latter is comparatively easy from the first, as the vocabulary, the means of communicating thought, is present and only the instruments, the manual alphabet and raised print, are to be learned. After that the pupil needs to be shown, told, directed, and instructed. As far as book knowledge is concerned, it may be acquired as readily by that class of deaf-

blind as by any other class of students. Of course, the avenues of sight and hearing being closed, a vast amount of real information is impossible which comes to the hearing-seeing student without effort and which gives him a great advantage. But as far as the pedagogy is concerned, the difference between the instruction of that class of deaf-blind and of hearing-seeing students is only the difference between using nature's intended instrument, the voice, and nature's best substitutes, the finger spelling and raised prints.

The first class of deaf-blind, those whose affliction occurred before language had been acquired, presents a different problem. She must begin at the beginning of things. They have neither the medium nor the instrument of conveying thought. The vessel, the mind, is there for receiving and giving out impressions, but how? With what? There is no language, no words, no letters, not even signs beyond those of the brute animal without the brute animal's instinct. The pupil can not hear the teacher's voice nor see her motions. In all probability, it does not know that there is a language in existence, and surely knows nothing of arbitary characters, alphabets, for expressing thought.

Leslie Oren was in this very condition when he was brought to the Institution for the Deaf, Columbus, O., in September, 1898, and turned over to his teacher, Miss Ada Lyon. Miss Lyon was entirely unacquainted with the special work of educating the deaf or blind. She had never seen either class of child instructed. She had never seen a deaf-blind child, and until six weeks before she began her work with Leslie did not know a letter of the manual alphabet. But, she had been a teacher in the public school; she had been a student of methods and had had some pedagogical training after the spirit of independent normalism. The superintendent of the Ohio Institution was at a loss in finding a suitable teacher for Leslie. He thought he would like one with an experience in teaching the deaf-blind, but there were none available. Then he thought he should get one familiar with either a deaf or a blind school. He advertised, stating the special work he wished the teacher to do. There were two applicants. On looking them up he found they had both been dropped out of their work because of their inabilty to do it satisfactorily. He hesitated no longer to select a woman from the public schools. As between a first-class teacher in the public schools, although she could not make the manual letter "A," and had never seen a deaf-blind child, and a failure in the special work of teaching the deaf, the choice was

easy. Miss Lyon came to the Institution August 15th, and began a training for her work. Leslie came at the opening of school in September. He was a typical deaf-blind child, having lost his hearing and sight at two years of age, before he had gained a knowledge of more than the simplest language, which he soon forgot. Miss Lyon had been much concerned about the new work she was to enter and was more than solicitous as to what kind of a child her pupil was to be. We felt much would depend upon his intellectuality and were, of course, hoping he would be bright. On the morning he was to come, a tall man was seen approaching with a babe on his shoulder. It proved to be Leslie and his father. We were expecting a boy like others five years of age. He was a baby in dresses. The father put Leslie on the floor and gave him a bag of peanuts. Poor Leslie! and poor Miss Lyon! They were both pitiful sights. Leslie, because of his great affliction, and Miss Lyon because despair was depicted in her countenance. Her face showed that she realized the hopelessness of her work. Leslie sat there and devoured the peanuts as though he were ravenous. Miss Lyon took him up; he wriggled back to the floor and to his peanuts. He impressed us as being hardly able to walk. Miss Lyon took him and his peanuts to her apartment, and their great work began.

I have gone into details in a matter which has been published again and again that you may view it from a psychological and pedagogical standpoint. It is desired that you see the pupil and the teacher at the beginning. The work was necessarily slow for quite a while. It is an old adage in Ohio that man can be reached most easily through his stomach. It was so with Leslie. In fact, it appeared to be the only way. Miss Lyon was his matron as well as his teacher. They were together all the time, eating at the same table and sleeping in the same room. He appeared to realize at first that she was his special friend and attendant. So when meal time came, she gave him the conventional sign for "eat." He seemed to understand it at once and gave it himself. She then substituted the manual spelling e-a-t for the sign. He soon got that. While, of course, he did not know the significance of the finger movements, he made them to indicate that it was meal time. So she taught him the names of articles of food, each word becoming easier as Leslie's interest and understanding grew, and it soon dawned on him the real significance of letters. From the first he liked to be out of doors, and to walk, although he could

not walk very well. He must have his hat and coat when he went out, and here was an opportunity to teach "walk," "hat" or "cap," and "coat." He learned these quickly. Before I had known how much he had learned he was in the office one noon and I spelled in his hand "walk." His face lighted up and he nodded his head. I then spelled c-a-p. He immediately thrust his hand into his blouse and pulled out his cap. He always uses his blouse to carry his cap or hat, ball, fruits, or any other article he may desire to have with him. We took the walk, and I found he had already learned several words. I regret that the exact date of this little incident was not kept, in order that it might be known how long he had been under instruction before he had learned this much, but I do not think it had been more than two or three months. He took delight in visiting the friends that he and Miss Lyon were making in the city, and learned the word "visit" as he had "walk;" also names of clothing, "new coat," "old coat," "clean waist," "soiled waist," "red tie," "new shoes," "stockings," "overcoat," etc., all of which had to do with a visit. In this way he learned that people, places, things, and actions have names, and his vocabulary was built up with amazing rapidity. From that on it has been a matter of showing, telling, directing, and instructing. He has been, and is, learning as other children do. He quickly learned the raised letters. Miss Lyon learned the point print and taught it to him. He learned the several kinds of point print so well that he is not confused by them. As an example of his unusual quickness to learn, he was given a book with the "Moon" system of raised print. Miss Lyon brought the book in and gave it to him. She went about putting her wraps away, not giving Leslie any attention at all. In a very few minutes she saw him at the typewriter transcribing from the new book. She advanced, and to her surprise he had learned the print and had transcribed several paragraphs of a Bible chapter. He became familiar with the typewriter in a very few days, learning not only all of the keys with their positions so he could operate them without having the raised letters on them, but he knew the parts and mechanism of the machine. He can write from thirty to forty words per minute. One day his work was cut short and he left the typewriter in the middle of a word. When he returned to his work the next day he began with the next letter, proceeding as though he had not been interrupted at all. This, I think, is a psychological result which would be absolutely impossible with a seeing, hearing person.

Here is another instance in which he showed unusual reasoning powers for a boy of his age. He was learning the names of the

months. It was March. At the same time he was writing a daily journal after this fashion: "We arose at 5:30 o'clock. We dressed ourselves, washed our hands and faces. We combed our hair. We marched into the dining-room. We ate our breakfasts. We marched out," etc. April came in, and Miss Lyon explained the new month, and told him March was gone and would not come again for twelve months. He understood. The next morning he produced his daily journal. The rising, dressing and washing were as on previous days. Then came the statement: "We mar—no, we apriled into the dining-room, ate our breakfasts, and apriled out." He had learned the verb "march" at the same time he had learned the name of the third month. So when April came, he drew the same analogy.

Since his coming to the Institution he has enjoyed an invitation to take Sunday dinner with Mrs. Jones. Those invitations came irregularly at first. On one April 7th, as he finished his dinner and gave Mrs. Jones the usual kiss, he spelled on his fingers: "I will take dinner with you again on April 21st." He was only eight years old, and we were surprised that he had located the date exactly two weeks ahead. Upon a little reflection, we remembered it had been just two weeks since he had taken his dinner with us. Again, the working of the little fellow's mind was seen to be along the line of precedents. Once he came to dinner without any invitation. We asked who invited you? He said nothing, but looked confused. Did Mrs. Jones? He answered, "No." Did Mr. Jones? "No." Did any of the children? "No." Who invited you, then? He spelled with his fingers, "G-O-D." It is needless to say the invitation was honored. But the original mental action of the mind is worthy of note, and may we not get out of that answer his conception of God as being all-powerful, sending him without an invitation against his will, yet yielding to it? He had not yet been taught the orthodox belief that it is the devil who makes us yield to our will when we know it is wrong to do so. And so for several years his answers and suggestions have been a surprise to us. They are always interesting, and sometimes exceedingly amusing. They all show the working of a bright human mind drawing its inferences, analogies, and conclusions from the crudest premises. But these are all the child has, and it is much to his credit that he uses them to the best of his ability. It is by this use that he learns the truth. He often looks chagrined when he has drawn a ridiculous conclusion, and sometimes laughs heartily at it when he is told about it.

As a matter of necessity, the beginning method of educating a deaf-blind child is inductive. It was especially so with Leslie for the first six years, and is much so yet. He was so eager for information that he wanted to devote his whole energy to securing it, and almost refused to give out any he already had. By degrees only has his teacher been able to overcome this difficulty, and made him to understand that his mind will grow only by making use of it in imparting the information he has. He wants his mind to grow so he may be like certain men he knows. When he is reminded of them he will do his best to write and talk. He is now being taught by both the inductive and deductive methods, and his progress, always marvelous, is increasing with his age. From the first he has abhorred the learning of speech, and while his voice is good, we feared for quite a while that he could not be interested in it. But patience at last triumphed, and he is making a strong effort to learn to talk, and is succeeding very well. In all of his work in language, in history, in geography, in arithmetic, and in elementary science he has reached the point which gives every assurance that the extent of his education will be in proportion to his opportunity. To achieve this he has had the blessing of nature in mental endowment and the good fortune of a devoted and capable teacher. Miss Lyon has worked out her own methods, directed her own efforts, and the results belong to her and her pupil.

In this great work the living benefactor of the deaf-blind, Mr. William Wade, must be taken into consideration. His ready interest and coöperation has been a continual inspiration to all interested in the work. His willingness to provide equipment without stint or limit, the opportunity he has furnished teachers and pupils for travel, his keeping in constant touch with the teachers through correspondence and visits have not only served the important purpose of advertising what can and is being done for such unfortunate children, but has made the teaching itself doubly effective.

I cannot close this paper without drawing for all teachers the great and important lesson which this special work contains. We have said that, although Miss Lyon was a successful teacher in the public school, she entered upon this special work without preparation; so she did. We have said that Leslie is an unusually bright boy; so he is. But he is deaf and blind. The results are those wrought by a kind, patient, loving, interested, hard-working, and persevering teacher upon a bright child. But it must be borne in mind that the child is doubly handicapped. What would the results

have been had a lazy, indifferent, careless, easily discouraged, and excuse-finding woman been in charge of the same mind? She may have had the highest and best training, but what would you have expected? Good results are for the strong teachers individually. Training is a great help. No one realizes its importance more than I for the beginning teachers, and especially the teacher of deaf children. But individuality, force well directed, faith, love, patience, every-day perseverance, these, and these only, bring results. What a great blessing it would be to the children in our public schools, special schools, private schools, colleges, and all schools, if all teachers were of this kind.

Following the reading of the paper of Mr. J. W. Jones on the subject of the education of the deaf-blind, Leslie Oren (deaf and blind) and his private teacher, Miss Lyon, appeared before the audience, and Miss Lyon carried on a conversation with Leslie Oren, first by the manual system of communication on the fingers of Leslie Oren, and finally by his making responses orally. Following is the dialogue between teacher and pupil, conducted by means of the manual alphabet:

Q. Where did you go yesterday? A. We went to the Heinz pickle factory.

Q. With whom did you go? A. I went to the Heinz's pickle factory with Miss Lyon and Mr. Jones.

Q. What did you see first? A. We saw the men making boxes on the machinery.

Q. What did you see next? A. The men printing the names on the boxes.

Q. What did you see next? A. I saw the horses and stables.

Q. What kind of beds had the horses? A. Nice, clean straw beds.

Q. How many horses were there? A. 150.

Q. What color were the horses? A. Black, and one large white horse.

MISS LYON: He is going on and telling that the largest horse, the big black horse, was named Don.

Q. What did you see next? A. I saw the canned beans, and the pickles and olives and onions, and apple butter, strawberries, and pumpkin, and catsup and corn and squash.

Q. Where did you go next? A. I saw the 600 girls' dining-room.

Q. Where did you go next? A. To the hall. I heard the music; good.

Q. What next? A. I ate supper in Mr. Heinz' dining-room. I ate catsup soup.

MISS LYON: It was so hot. He means tomato soup.

Leslie, continuing: Baked beans, chow-chow, olives, pickles, strawberry jelly, butter, peaches, cherry preserves, cherry jelly.

Q. What did the man give you? A. A nice silver spoon.

Q. Did you thank the man? A. I thanked the man.

Q. Did you see Mr. Heinz? A. No; but I should like to see him. He is a good, kind man.

MISS LYON: I believe that is all I had better ask him now. I will give him a few questions spelled in the hand, and have him articulate.

Q. How many days are there in one week? A. (By word of mouth.) There are seven days in one week.

Q. What day do you like best? A. I like Sunday best.

Q. Why? A. Because I can eat dinner with Mrs. Jones.

Q. What do you like to eat best? A. I like to eat chicken, pie, cake, and ice cream.

Q. What day is today? A. Today is Wednesday.

DR. CROUTER: Has he any idea about what part of the day this is?

MISS LYON: Well, I should say he has. He has been telling me that it is dinner time for about an hour.

DR. CROUTER: Is that the way he marks time? By the meals?

MISS LYON: Yes. But he can tell almost to the minute what time it is. He can tell what time school should close, and what time it begins.

Q. What time is it? A. 12:20. (The pupil was here given a watch with notches on the margin, from which he gave the time.)

DR. CROUTER: Suppose he did not have the watch, could he judge of time at all?

MISS LYON: Yes, sir.

DR. CROUTER: Can he tell day from night?

MISS LYON: Yes, he can tell day from night by the change in the atmosphere.

MR. WALKER: What point system does he prefer?

MISS LYON: The American Braille. It is much more rapid than the New York Point.

MR. DRIGGS: Mr. Jones said in his paper that the boy asked you to give him a red tie. I would ask how he knows the color.

MISS LYON: I do not know how he knows, but that is his favorite color. Of course, he cannot have any conception of color; but when I was buying a suit for him last fall he wanted a red suit.

MR. DRIGGS: He said he enjoyed the music.

MISS LYON: He does. The rhythm, I think; he has no idea of music.

Leslie then made the following speech by word of mouth:

"I am happy to be here today. I cannot see you. I cannot hear you. But I know you have come to see me. I do not want to be a dumb man; I want to be a wise and good man. I love you. I kiss you good-by."

Here the boy went to the blackboard, and with a piece of crayon wrote his name, "Leslie Oren."

THE PROPER TREATMENT OF THE VERB.

S. G. DAVIDSON, INSTITUTION FOR THE DEAF AND DUMB, MT. AIRY, PHILADELPHIA.

The verb is the most important word in a sentence. I once asked a class why this was so, and a pupil replied, "Because verbs do things," which was not so bad an answer, but there are other reasons. The verb is the heart of the sentence, contributing more than any other part of speech to the life, movement, and force of language. It is the only word that can be used alone to express a definite, complete idea—as in the imperative sentence. All words are connected with it, and modify or are governed by it, either in themselves or through other words. Through its different forms and connections it may express either widely divergent ideas or almost imperceptible variations of meaning; and it is the basis of most of the colloquialisms that are the common coin of speech, and that, as illustrating national characteristics, best distinguish one language from another.

Considering its nature and the variations in its forms and uses, it is not strange that the deaf are so slow in mastering it. In the first place, many common verbs are abstract, in that they express actions or states not perceptible to the senses. It is easy to teach a deaf child the meaning of *cut, run, jump, laugh*—as easy as to teach the word hat—but his comprehension of such verbs as *think, know, love, hate,* must at first be indistinct and hazy, and only becomes

clear and definite with his progressing mental development and through frequent use in association with the idea. Then the verb is likely to be confused with the noun or the adjective. When the pupil says, "Mary's father was died last week," he is confounding the verb *to die* with the adjective complement *dead*. Another serious difficulty is that the teacher frequently cannot tell whether, in a sentence that is apparently correct, the pupil has used the verb form corresponding to the idea he intends to express, and so cannot point out the error if it exists; or in a sentence that is obviously incorrect, he cannot tell which of several ideas the pupil had in mind, and may give him the wrong form. Thus in the sentence, "Mary's father is died," we do not know whether it was intended to say "Mary's father is dead," or "Mary's father has died," or even "Mary's father is dying," and the correction the teacher makes may still further confuse instead of helping the pupil.

Nouns are inflected only to show number and the possessive case. Personal and relative pronouns are inflected to show person, number, gender, and case, but they are so few that they present little difficulty to the teacher or the pupil. Adjectives vary in their forms only to express degree. But verbs! We have first the verbs *to be, to do, to have,* etc., with all their inflections to show voice, mood, tense, person, and number when used alone, and again we have them combined as auxiliaries with other verbs having their own inflections. The child must be brought to a clear comprehension of the properties of the verb, which sometimes involves the development of new modes of thought. He must remember all the various forms and combinations of the verb with its auxiliaries, and be prepared on the instant to use the form appropriate to the expression of his idea. Then, again, verbs vary in their tense forms not only in relation to the absolute expression of time, but also in correlation with other verbs with which they may be used. There are the principal parts of all the irregular verbs to remember. The position of the verb in the sentence varies according as it is used in a statement, an interrogation, or an exclamation. To contribute to the confusion of thought and form, we have the participles and infinitives, with all their variations of inflection and usage. We all know the difficulty the born deaf have in sensing a phrase as a unit for the expression of an idea. They will take each word separately, and the phrase means to them the sum of the meanings of the individual words composing it. This difficulty exists with them in verbal phrases as in others. When we say "He might have been killed," or "He should

have gone," the tone, inflection, and rapidity of utterance make clear to the ear the unity of the verb phrase and, approximately, the thought it is intended to convey. With the deaf we have frequently to develop the thought at the same time we are giving them the means of expressing it. The various meanings a verb may take on in colloquialisms are also very confusing to the deaf child. When he has been taught that it expresses a certain act or state, he finds it hard to understand why, in another context, it should mean something very different—sometimes quite the opposite.

Years ago I copied into a note book every mistake made in the course of their composition work by the forty pupils who came to me daily for instruction in English. An analysis of these, made at the end of a year, showed that more than 75 per cent of the mistakes were in the verbs. A similar inquiry made at my suggestion in another school gave approximately the same results. Considering the difficulties I have pointed out, this was not to be wondered at, but it was evident that more time and care should be given to the teaching of verbs. The language teachers of the different grades in the Department—the Advanced—took up the matter, and by working together were able to so far reduce the number of errors in the use of the verb that they do not now average more than 25 per cent of all their mistakes, with the dullest, most backward pupils. With brighter children they have practically been eliminated. It is also to be noted that with the improvement in the use of the verb, there has been a general advance in correct usage of all language forms and constructions, which suggests the advisability of making the verb the centre of instruction in all the elements of the sentence. Drill on the verbs, if sufficiently broad and thorough, will give incidental exercise on all the other parts of speech in every variation of form and usage, and each in its right proportion.

The teacher of advanced classes should not feel that, because certain forms of the verb are taught in the lower grades, the teachers there are to blame if the pupil does not use them correctly. As I have tried to show, the verb presents so many difficulties, it may well take the whole period of the deaf child's school life to master it. Yet it is important that as rapid progress as possible be made in this particular, for deficiency in it greatly interferes with advanced language instruction and with the thought studies. It may be that better methods of teaching the verb than are now employed with the lower grade children will greatly facilitate the work, both there and in later instruction.

We find in advanced classes that even after pupils have been taught the present-perfect and past-perfect tenses so that they understand them, and can use them with unvarying correctness when called on to do so, they continue to use the past tense to their exclusion in their compositions, no amount of drill or correction making permanent impression upon them. Is not this because the perfect tense forms are not taught them early enough, and they become so habituated to the use of the past tense that they employ it unconsciously?

There is an idea among teachers that the perfect tenses are so difficult for the child to master that they should not be introduced until quite late in the course. In fact, they are as easy to teach and for the child to learn as the so-called simple tenses, and as they meet a need of which even very young children are conscious as expressing conditions with which they are familiar, they should be given early. When a child comes into a room and asks, "Where is Miss Jones?" why not say to him, "She has gone to the city," instead of "She *went* to the city," which is incorrect, as the past tense would here call for an adverb of time, or "She *went* to the city *this morning*," which, while correct in some connections, is not here, since the question calls for no reference to the time, and the answer is not the customary one. Two good rules in language instruction are to teach nothing that must be later untaught, and to give words and forms as the child's needs call for them. If circumstances require the use of the present-perfect, why not give it to the pupil, explain it, and permit him to use it. I discovered that my little boy used the present-perfect correctly when only two years old. It cannot, therefore, present any difficulty to the most infantile mind.

There has been much discussion in the profession over the order in which the tenses should be introduced. Some say the present habitual should be given first; some, the present progressive; and some, the past definite. The question is of importance in connection with the general scheme of primary instruction, but as regards the ultimate mastery of the tense forms it probably makes little difference which comes first. But it is necessary that the child be given as quickly as possible *all* of them, and such others as are required for the correct expression of his ideas. I do not mean that the tenses should be thrown to him in a bunch—it hastens the work and prevents confusion to drill him on one tense at a time until he understands and remembers it—but to withhold a form too long, to deny it to him when he needs it, and to deliberately teach him the wrong

form, does harm that is seldom remedied by the best of future teaching. The teacher must have a well-constructed system which she should follow consistently, and return to when forced to depart from it, but she should be prepared to put it aside whenever necessary to meet the pupil's needs. The method will then be to the teacher a scientific, but to the pupil a natural one.

The first form of the verb used with the children in an oral school is the imperative, in connection with their lip-reading exercises. This teaches the significance of the verb and gives the root form. Then comes the past tense of intransitive verbs in such statements as *John fell, Mary laughed.* This is the simplest possible combination of words, and in using it the child is not thinking of the time represented, but of the meaning of the verb as expressing an act or state with which he is familiar. The transitive verb, with its direct object, naturally follows as an extended combination of words. The present habitual may also be introduced in such sentences as *I love you,* the mind of the pupil still being occupied rather with the meaning of the verb than its form. But when time words are given in association with the verb, the verbs *to be* and *to have,* with their variations, are introduced, and the pupil is required to ask and answer questions, then the greatest care should be taken that the proper correlation of the verb with its adverb of time is maintained, this being the surest means of giving the child a clear idea of the time value of the verb form and preventing confusion. And here the need for the perfect tenses will quickly be manifested. The present-perfect is frequently required in the simplest of sentences, and the teacher should not avoid using it when it is called for, nor postpone unduly drill upon it. The present-perfect and past-perfect are both necessary for the proper correlation of verbs in the *asked, said,* and *told* constructions, and should certainly be introduced with them, if not before.

In questions, the English language is not always consistent in its verb forms. We would say, "Who *has taken* my paper?" but also, "Who *broke* that window?" The former is logically the correct form, but usage has made the latter also proper. In declarative statements, however, the future and the past tenses so generally require an appropriate adverb of time, that this should be impressed upon the pupil as a rule. Teachers should not drill pupils upon these tenses without using the proper time expressions, and should not allow pupils to use them without. Some confusion might be prevented if the teacher would avoid in her drill such indeterminate time phrases

as *at Christmas, this morning, in the evening.* These are past, present, or future according to the tense form of the verb, and may be used with any tense. The use, with the past and future, of definite time words and phrases—as *last Christmas, tomorrow, yesterday, last year*—will impress upon the child the time significance of the verb, and *this* once understood, he will deduce from the tense form the time of the indefinite time expressions as *past, present,* or *future.*

From always associating an adverb of time with the past tense, the pupil can easily be taught the value of the present-perfect to express indefinite past time, as being used in preference to the past when we do not know the time, as, *I have lost my knife,* or do not care to give it, being concerned only with the statement of the fact—as *I have received a letter from home.* The present-perfect is also used to show an act since a definite past time, as, "*I have not gone* home *since Christmas.*"

The past-perfect is also easy to make clear. It is used to define an act or state that preceded another in a definite past time. I teach it by means of couplets of simple sentences, and draw out the significance by questions:

John struck James yesterday.
James kicked John.

(The pupil's attention is called to the fact that both verbs are in the past tense.)

"Which happened first?" "John struck James first."
"Which happened second?" "James kicked John."

Harry pinched James last night.
James had made a face at Harry.

"Which happened first?" "James made a face at Harry first."
"Which happened second?" "Harry pinched James."
"How do you know James made a face at Harry first?"
"Because *had made* is in the past-perfect tense."

I have pupils write numerous such couplets, as *John's teacher scolded him yesterday. He had not studied his lesson. I saw a policeman arrest a man last Saturday. The man had stolen something.* When the significance of the past-perfect, as showing that the action of the second statement preceded in time that of the first, is clear to them, I have them combine the couplets with a subordinate conjunction into compound or complex sentences, as *John's*

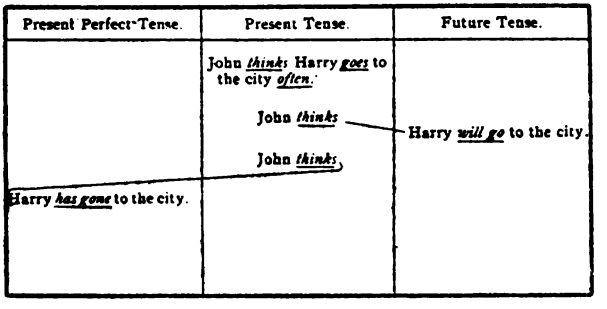
teacher scolded him yesterday because he had not studied his lesson. Last Saturday I saw a policeman arrest a man who had stolen something. This method may require some modification with younger children than I have had experience with, but I once tried it as an experiment on a very dull manual class who had never had the form, and in an hour's drill made it so clear that they were able to fill their slates with perfectly correct and sensible sentences in the construction.

A device I have found helpful in illustrating the correlation of the tenses is as follows: I take five wall slates in a row, and at the top of each write the name of a tense and its significance as expressed by time words or phrases, the order being as follows:

Past Perfect Tense. (Before past time.)→	Past Tense Yesterday, last week, etc.	Present Perfect Tense. (Before now.) ←Since past time	Present Tense. (Now) or (always)	Future Tense. Tomorrow, next week, etc.

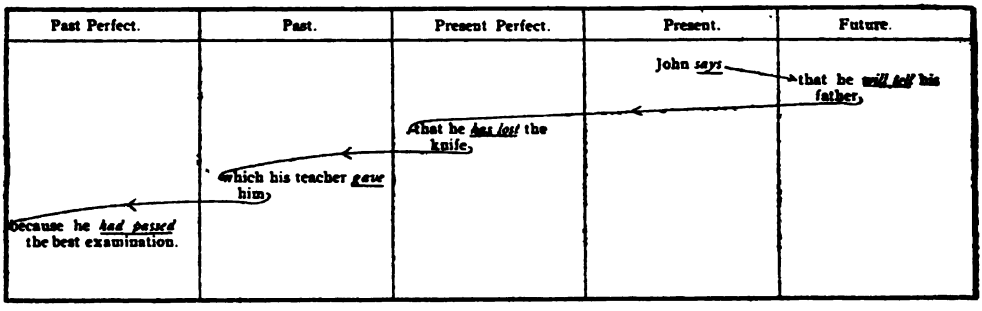
The parentheses show that the words enclosed indicate the idea at time expressed by the verb form, but are not used unless it be for emphasis.

Now, standing in front of the present tense slate, I show that we would say: "John *thinks* that Harry *goes* to the city *often,*" or "John *thinks* that Harry *will go* to the city," or "John *thinks* Harry ***has gone*** to the city," according to the time relation of the second verb to the first, indicating this relation by pointing to the appropriate slates, or by writing on them, thus:

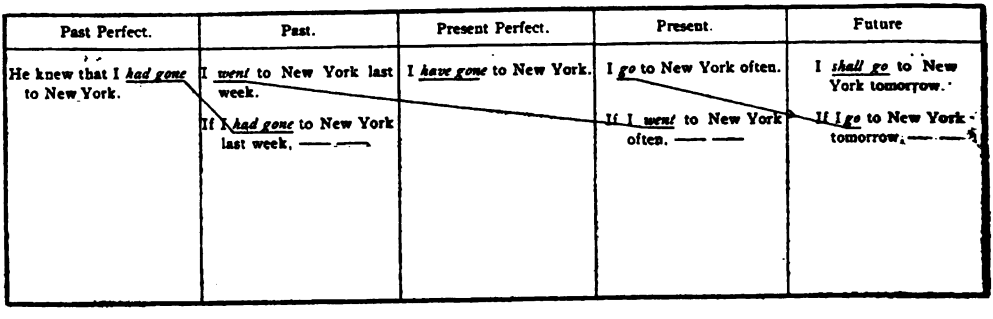


Or, standing in front of the past tense, I show how and why we should say, "John *thought* that Harry *went* to the city *often*," "John *thought* that Harry *had gone* to the city," or—explaining that we use should or would instead of shall or will to express an action as future from the past time—"John *thought* that Harry *would go* to the city."

Or we may give a series of correlated statements, including all the tenses, thus:



This arrangement of slates I have also found useful in explaining the present-perfect and the past tenses, as showing the present-perfect comes between the present and past, and expresses an indefinite time before the present or since a past time; and that the past perfect indicates some indefinite time before a definite past time or action. It is also invaluable in teaching the forms of the subjunctive mood, as it is only necessary to show that, omitting the present-perfect, each tense form of the indicative mood takes a step forward to express the subjunctive idea, thus:



This makes clear at a glance, and helps the pupil to remember, that the present indicative forms the future subjunctive, the past indicative, the present subjunctive, and the past-perfect indicative, the past subjunctive.

A mistake some teachers make is, teaching the meaning of the passive voice by translation from the active. Thus: *Mary struck John=John was struck by Mary.* This confuses the child as to both the form and the purpose of the voice. The former is proved when he writes *Mary was struck John,* or *Mary struck by John.* There is always danger in teaching little children things together or by contrast. If I told you that Mr. Jones and Mr. Smith lived, respectively, at 238 North Fifth street and 832 South Fifth street, you would almost certainly confuse the addresses, whereas if they were given you separately at different times you would have no difficulty in remembering them. This explains the trouble deaf children have with some other language forms. For instance, when they confound *to be* and *to have* it is often attempted to make them clear by contrasting numerous statements in which they occur. It would be better to drill on each separately.

In teaching the passive by translation from the active, children get the idea that *by* is a necessary accompaniment of the passive voice, and also that the two voices may be used interchangeably, with the result that we have such sentences as "My hair was combed by me this morning before I came to school."

I once tried to teach a class of small children who had never used the passive voice, its significance. I asked them whom we should talk about. "Albert" was suggested, and I wrote Albert on the slate under 1. Then I struck Albert with the pointer and invited the pupils to write the verb under 2. They at once realized the impossibility of filling the blank with any of the verb forms they had learned. One little fellow came up hesitatingly and wrote *"struck,"* then shook his head, erased it, and sat down. I finally gave them the form *was struck,* and they saw its value and were ready to use it in similar action work. Doubtless this method is employed by many teachers; but I know there are still some who present the passive by translation from the active.

There is nothing superfluous in the English language. As no two words, so no two forms or constructions have exactly the same meaning. Regularly, the subject, the thing we are talking of, comes first in a sentence, and the verb takes either the active or the passive form according to whether the subject acts or is acted upon. This is easy to make clear, and the understanding of it will prevent many absurdities in expression.

It is not my purpose to present a complete scheme for the teaching of the verb, nor to point out all the difficulties with which the

teacher meets and how to overcome them. I merely wish to suggest to teachers of lower grades the importance of hastening the work as much as may be consistent with thoroughness, and to indicate some particulars in which they might better their own work and facilitate that of the higher classes. I would also urge upon all teachers of the deaf a careful study of the nature of the verb, its uses, its forms, its relations to other words, the special difficulties it presents to the deaf child, and the best methods of overcoming them. Many teachers have extremely hazy ideas on the subject, these drawn chiefly from the grammars they studied in school, which are very unsatisfactory guides to the instruction of the deaf. I once found a teacher explaining the present-perfect tense with the one word "finished." When asked what was meant, she said the grammar stated that the perfect tenses denoted completed action. A little reflection would have convinced her that the past-definite often shows greater completeness in idea than either of the perfect tenses. Another insisted upon teaching the past-perfect by means of such sentences as "I *had eaten* my dinner *before I went to the shop yesterday.*" Most of the disputes constantly rising about the verbs are due to the ignorance of one or both parties thereto; but then it would be a very wise man who could truthfully assert that he knew all about verbs.

Drill is necessary—drill almost from the day he enters school and right through to the day of graduation—to enable the average deaf child to use verbs with reasonable correctness, and there are forms and shades of meaning he will never master. He must have his conception of the meaning and use of the various forms constantly refreshed by sentence writing and explanation to prevent their being forgotten or confused. Much can also be done by indirect teaching of the verbs through the thought studies, the teacher presenting the subject so as to exercise upon and make clear the meaning and use of verb forms in which a class may be deficient.

WHAT WE HAVE DONE IN OUR LIBRARY CLUBS.

CANDACE A. YENDES, INSTITUTION FOR THE DEAF AND DUMB, EDGEWOOD PARK, PA.

Macaulay said he would rather live in a garret with a library than in a palace without one, and I am sure we all agree with him, for without the love of books the richest man is poor; but with even a limited appreciation of their hidden treasures the poorest man is

rich, for he has a wealth which, unlike worldly riches, increases faster the more it is made use of, a wealth which neither moth nor rust doth corrupt, nor thieves break through and steal. And it is not too much to say that, other things being equal, the youth who has the most intellectual resources is best fortified to resist foes both from without and within, if for no other reason, because he has fewer idle moments. The ruin of many boys and girls dates from some idle hour. Occupation is the armor of the soul.

George Adams Smith says, "An empty head is the unsafest and unholiest thing in the world," and Charles Dudley Warner, that "good literature is as necessary for the growth of the soul as good air is for the body."

This being true, then, the Lord will not hold us guiltless if we fail to provide proper mental food for the deaf child, and to teach him how to appropriate it for his own use.

When we reflect that not more than one family in ten in our enlightened Republic are readers of books, and that if the reading habit is not cultivated in childhood or early youth, it is not likely to be acquired at all, we shall realize our responsibility for the development of book lovers among our pupils, and that it is not too soon to begin NOW to cultivate a taste for reading.

"'Tis not a soul, 'tis not a body that we are training up, but a man, and we ought not to divide him," says Montaigne.

Just as long as there is progress in teaching will there be problems for the teacher to wrestle with, and one of the most important of these that confronts the Twentieth Century teacher of the deaf is, how to cultivate the reading habit in his pupils.

It is safe to assume that no one today questions the importance and necessity of this vital phase of the teacher's work; but how conduct the student into that region of poetry, history, fable, romance, and science which we ourselves have to some extent explored, and which, while it satisfies and refreshes, never satiates, but lures us on most cunningly to vaster regions and more exalted summits?

We think that the Western Pennsylvania Institution has to some extent solved this problem in its organization of Library Clubs among its pupils, and while it is hardly possible to give actual statistics of the work, it is my purpose to give some idea of what we have accomplished and how it has been done.

Francis W. Parker warns us to beware of any quack who pretends to have a perfect method of teaching any subject. We do not wish to be stamped as quacks, and have no fear of being so desig-

nated, for we do not claim to have discovered any royal road to this, any more than to any other, object in life, nor to have overcome all the "lions in the way," for—

> "Only in dreams is a ladder thrown
> From the weary earth to the sapphire walls."

But we do claim to have given our students a bird's-eye view of the vast field of literature and at least a bowing acquaintance with some of the best writers and their works; and, while the results have not measured entirely up to our ambition, still we have made very gratifying progress, which, if slow, has been none the less sure, and each year finds us nearer the end sought, with younger classes added to the clubs, more books distributed, more and better reading done, and a growing enthusiasm and interest in the work.

Thus has been begun that continuous education which comes from books, man's priceless heritage from man, and the difference between the future of the youth who has formed the reading habit and the one who has not, is even greater than that between the traveler who starts on a journey with a well-filled purse and one whose purse is empty.

Among the books which our pupils have read are: Fifty Famous Stories, Little Women, Six Little Headaches and Six Little Colds, Twilight Stories, Robinson Crusoe for Children, First Steps in the History of Our Country, The Story Hour, The Revolutionary War between England and America, Old Stories in the East, Story of the Bible, Beautiful Joe, Success, and Swiss Family Robinson, beside numerous adapted stories, biographies, and histories.

Besides acquiring a taste for reading, they have learned to handle books with reverence and to give them intelligent care. The publications of The Educational Publishing Company, American Book Company, Silver, Burdette & Company, and University Publication Company, all of New York, have been very useful to us in our work.

Organization of the Clubs.

About three years ago our Superintendent, Dr. Burt, realizing that results do not come by chance; that reading to the deaf child is not a gift, but a growth which comes only from practice, and that method, regularity, and attention will accomplish wonders in attaining this end, had two reading clubs organized among the older boys and girls for the purpose of having them read regularly, persistently, and systematically, and in this, as in nearly everything else, we have

found that companionship was helpful and promotive of much good, those inclined to lag behind being stimulated by what they see the others accomplish.

The clubs were organized under the direction of Miss Barker, Mr. Allabough, and the writer, whose duty it was to meet with the pupils once a week and direct their reading.

In order to give dignity and system to the work, officers were chosen from among the pupils, consisting of a librarian and secretary, the duty of the former being to make a record of all books taken and returned, and of the secretary to keep a list of the members and a record of attendance. We have aimed, however, to have the machinery of the club as simple as possible.

Selection and Grading of Books.

"No one thing will contribute more to intelligent reading than a well-selected library."—Horace Mann.

To Mr. Andrew Carnegie, whose name is familiar to all, we are indebted for the endowment of a library fund, the income from which amounts to about $250 a year. Our students' library purchased from this fund now numbers about 3,000 volumes.

The list of "Best 1,000 Books for Children from the Kindergarten to the end of the High School Period," which was compiled by the librarians of Cleveland and Pittsburg, was consulted in choosing these books. We found, however, that many of the best 1,000 books were too advanced for our work in the beginning.

By an arrangement of Dr. Burt with the Carnegie Public Library at Braddock, we have the privilege of going there at any time during the school year to select books for our use. Those used for supplementary reading in the public schools are purchased in sets of six to twelve, and have proved very helpful to us, as they enable us to arrange the members of the club in classes. This reduces the individual work to a minimum and economizes time and labor.

At first we had to select books for each member, even the most advanced pupils, but gradually the older ones have learned to go to the bookcases and make their own selections, often coming to us, however, for suggestions.

We observed that a poorly bound book with small type, narrow margins, and no illustrations, however suitable otherwise, was often passed by for one not so well adapted to their use, but more inviting in appearance. We learned from this that books to be popular

should be as attractive as possible in binding and typography, for no matter how such books may be regarded by a book-worm—one who has penetrated to that immortal substance which lies beneath the surface, the tyro is a long way from that degree of literary culture.

To be effective, besides being judiciously selected with reference to mental capacity, they must also, at first, be chosen with reference to the taste, prejudice, and interest of the reader, so that he will be willing to use his leisure time for reading, as well as to forage beyond the book in which his task has been assigned, for reading is study in its truest sense.

We believe that the work of the Library Club should coördinate to some extent with the school work, and, as far as possible, books of the same grade as their text-books have been given them, and also on topics allied to their work in the schoolroom, thus utilizing their stock of ideas as capital upon which to build, as a means of understanding literature farther and farther removed from their personal experiences and expressed by new words or familiar ones in new uses.

And this has also augmented the work in the schoolroom, for more than one teacher has testified to the benefit of the work in the library club on his class in composition, for one aim we have ever striven to keep before us was, to enable the pupils to wrest the idea from the printed symbols and to get not alone a solitary idea but connected thought.

We have tried to cultivate in the pupils facility, precision, and choice in the use of English when in writing a review of their reading; and their synopses often show intelligent comprehension of the thought; their questions and comments on what they have read being sometimes quite original.

The pupils frequently come to us for books of reference and for further study along the lines of their daily work in school, which further demonstrates the greater usefulness of the clubs.

The first thing we had to do was, to create a demand for the books we wished read, and this was done by the teacher telling the story quite briefly, giving its salient points, and perhaps a few facts with regard to the author, if a well known one.

At the same time, the author's other works, if any, were mentioned, and, if found upon our shelves, were shown to the pupils, also any available clippings, or pictures of the author, his home, or anything of interest connected with the subject.

The pupils were taught at the outset that history is "his story,"

and to discriminate between history and fiction, to classify books as biography, travel, science, fiction, or history, also to look for the principal characters in the books, especially the hero and heroine. The books were then distributed and portions assigned to be read during the week.

At the next meeting we had each pupil account for his reading, either by giving the story in his own words, by writing a synopsis of the required portion, or by answering test questions—according to the character of the matter read.

In questioning them about what they have read, the first inquiry generally is, "Is this story true?" Then some queries as to the time and place in which the scenes were laid, if they had any bearing upon the story or any importance of themselves. Any vagueness in the paragraph or context is made clear by judicious questioning.

Explanation of Terms.

"His eyes fell on his mother," "he burst into tears," "dropped her eyes with a blush," "exploded with laughter," "almost broke his heart," "carried the day," are but a few of the idioms of our beautiful mother tongue which they encountered in their reading, and which, with long-involved sentences and obscure passages, required explanation; but in this case, as in the definition of solitary words, they have been encouraged to seek the meaning in the context and at all times to get the thought from the sentence or paragraph as a whole.

The first aim of reading is thought-getting, not only of an isolated idea, but of it in its environment, and the ideal condition obtains when the child is able to attain this end automatically—without conscious thought—and this is accomplished more quickly when he is thrown upon his own resources; for if he reads persistently, attentively, and with a desire to profit, the ability to read understandingly and the power and habit of reflection which stimulates intellectual growth will surely be his own in due season. Emerson speaks of "creative reading in which the mind is braced by labor and invention so that the page becomes illuminated."

Last year the work of the clubs closed with a literary entertainment to which the officers and teachers were invited, and which, besides broadening the pupils' mental horizon materially, gave a new importance and impetus to their reading.

All assembled in the library, and roll-call was responded to by the members giving the names of authors represented in their library,

with the number and titles of their works. Short biographical sketches of the most noted authors were followed by rules for the care and handling of books. The crowning event of the program was a guessing contest of well-known authors represented by the members in costume, during which refreshments were served. The Heavenly Twins, A Bow of Orange Ribbon, Scarlet Letter, Beautiful Joe, The Woman in White, and Little Women were among those represented.

You may be wondering by this time if the work always goes on with unremitting interest, and I will anticipate by saying, by no means—baseball, football, commencement, and occasional party trousseaus are some of the interruptions, and we have to resort to all sorts of devices to revive flagging interest and enthusiasm.

Do you ask what proportion of our pupils may be said to have acquired the reading habit? Probably about seventy-five per cent of the boys, as against fifty per cent last year. The proportion of girls, however, is not so large, but when we remember that the girl lives in a much more circumscribed world than does her brother, we need not wonder, for the average girl's horizon is bounded on the north by her clothes, on the south by her domestic and social relations and duties, on the east by her matrimonial aspirations, and on the west by that class of masculines who alone can help her to realize these ambitions.

SOME ERRORS IN ARITHMETICAL METHODS.

BARTON SENSENIG, INSTITUTION FOR THE DEAF AND DUMB, MT. AIRY, PHILADELPHIA.

Eleven years' experience in teaching the deaf Arithmetic enables me to point out some of the errors which are liable to be made by those who attempt to elucidate this difficult subject.

That Arithmetic is a difficult subject all must admit. Normal children spend eight and nine years in mastering it, and many are hampered throughout the high-school course because they have not clearly grasped the fundamentals of the science. Because of the difficulties encountered by hearing children, some educators of the deaf in days gone by put forth little effort to teach their pupils more than the simplest rudiments of the subject. Some of us in these later days have become more ambitious and are trying to teach the deaf as much Arithmetic as hearing children learn before they take up work in algebra.

To do this, we must look well to our methods. The subject must be made plain enough for the deaf to grasp it. Since "Necessity is the mother of invention," teachers of the deaf should be in a better position to formulate methods of procedure than teachers of the hearing. I believe that methods of teaching Arithmetic can be so simplified that the subject-matter will be more readily understood by both the deaf and the hearing.

It must be evident to any one who has thought about the matter that our deaf boys and girls do not receive as many ideas from their parents and associates as hearing children do. In teaching the deaf it is always our first duty to lay down a foundation of ideas. Some proceed to give these ideas by teaching the children *definitions*, but a child's arithmetical knowledge is not much increased by learning formal definitions. A definition is not understood unless a child has sufficient ideas upon the subject of which the definition treats. If a child understands, it can make good enough definitions. If it does not understand, the definitions learned from the text-book are of little value.

A *correct idea* is better than a good definition. We give these ideas by the use of objects and other illustrations, and make explanations in language familiar to the child. Definitions come last. First, lay down a stratum of ideas; then give problems embodying these ideas to make the salient points of the subject stand out in bold relief; then give problems illustrating the various cases coming under the subject, as varying problems suggest different points of view, and, finally, have the pupils make definitions.

The chief error lies in too much relying upon the *doing of problems* to suggest the meaning of the subject under consideration. By doing many problems of a certain kind, pupils may infer some things which are true of a subject; but my experience is that children born deaf, and many of them coming from the lower stratum of society, make few correct inferences unless they first understand considerable of the nature of the subject with which they are dealing. Learning to do by doing results in a mechanical dexterity of reckoning not at all commensurate with the ideas the pupil has upon the subject.

Year after year I was taught in the public schools *how* to do things. The teachers had many pupils and many classes and did not know the subject of Arithmetic very well. They had no devices and no objects to illustrate their teaching. It was simply a case of showing how to do a thing and requiring the pupils to remember how it was done; subsequently, pupils would forget methods and

would go over the same work year after year, not having sufficient knowledge of the subjects with which they were dealing to enable them to look at the subjects in a rational way.

At the Normal School, I came in touch with a teacher who demanded reasons for all operations. He knew the subject thoroughly and was always on the watch for weaknesses in one's understanding of the subject under consideration. The result was that his pupils got into the habit of looking at things in a rational way, and he turned out many good mathematicians. A year in his class meant that one either had a good grip on the subjects taught, or else it was high time to turn from intellectual pursuits.

After a child knows how to figure, it is quite evident that the chief business of the teacher is to make plain the subjects which he is teaching, rather than to give exercises in figuring.

As has been said already, objects and illustrations are potent factors in giving ideas. Language itself is the ordinary method of conveying ideas, but an illustration with an object or by a drawing is more forcible in the case of those who do not understand language well. A few years ago the Superintendent of Schools in one of our largest cities advised his teachers to act out and illustrate with objects, rather than to rely on the spoken or written word, because language does not convey the meaning sufficiently well to duller children. If it is necessary to appeal to the sense of sight with objects and illustrations in the case of the hearing, much more is this method applicable in teaching the deaf, who have so much difficulty with language.

The *word* method and the *objective* method may be illustrated as follows: Let it be required to find the number of board feet in a plank of given dimensions; then, by the word method, a teacher would define a board foot as being a foot square and an inch thick, and would state that twelve board feet make a cubic foot. The objective method is to have a board foot in the class-room, and show that if twelve such board feet were piled on top of one another they would make a cubic foot of wood. The pupil, by this latter method, sees and understands that twelve board feet make a cubic foot of wood, and after the board foot and the cubic foot have been put away, the pupil in his imagination builds up a cubic foot with twelve board feet. The presence of the object after the illustration has been made does not assist the reasoning process, but hinders it. The objects should be removed after the illustration is finished. We reason with ideas.

The objective method should be resorted to in all cases where it is possible to use it. A rod-pole should be found in the class-room. The acre should be measured on the lawn or in a near-by field; a mile should be measured once for reference; a square mile may be indicated approximately. All measures should be definitely comprehended by the pupil. If the measures are not comprehended the pupil's work will be vague.

Tables of measure should not be taught as memory exercises. The pupil gets into the habit of running over tables in a glib way, not thinking of the measures at all. It is very important that the child be made to make his own comparisons. The tables should not be set down in the text-book for reference excepting in a way like this:

inches = 1 foot,
feet = 1 yard,
yards = 1 rod,
320 rods = 1 mile.

The teacher's office is to so picture relations and sizes as to get the pupil to draw correct inferences.

The old-fashioned way of teaching Arithmetic was to find a good way of doing a thing and then to formulate the method into a statement called a *rule*. Whether the rule was understood by the pupil or not, it served as a means of getting correct results. It was a way for those who did not understand a subject to obtain the required results. The rule for finding the number of board feet in a plank or joist was stated as follows: "Multiply the length in feet by the width and thickness in inches and divide the product by twelve."

This rule has no meaning if the fundamental facts of board measure are not known, and there is no necessity for the rule if they are known. The rule is soon forgotten and the following year it must be learned again. More time has been lost in teaching Arithmetic by the *rule* method than in any other way. If a pupil understands, he will proceed along right lines regardless of rules. Another objection to rules is that they are often harder to understand than the subjects to which they apply. The rule for Reduction Descending has been stated as follows: "Multiply the number of the highest denomination given by the number of units of the next lower denomination which equals one of this higher, and to the product add the number given, if any, of this lower denomination."

It certainly takes more thought to understand this rule than to understand the subject to which it applies, and the rule could not possibly be long remembered by pupils who have so many other useless things to remember. Why was this rule ever put into a text-book on Arithmetic? Simply to work out a sort of symmetry. If rules are given for doing one thing why not for doing another. *Rules of operation should have no place in text-books.*

Many authors of modern text-books on Arithmetic agree to this last statement. They put neither rules, nor principles, and few definitions into their books. They proceed by what is called the *Spiral Method.* By the Spiral Method, the various subjects treated of in the Arithmetic are constantly passing under review. When a new subject is taken up, a lot of problems are given under that subject, then a general review follows, after which another subject is taken up, and so on. It is largely left to the teacher to make explanations, and right here lies the weakness in this method. If the teacher does not make the subject-matter very plain, the pupils will remember how to do the problems any way, because of the fact that the subject is brought to mind every few days, and the child learns how to do things without fully understanding, as by the rule method.

It has been intimated all along that one is apt to forget that which is not well understood, but things which have once been understood are also forgotten. It is not sufficient to understand; to fix the matter in mind to stay, it must be repeated again and again. The *explanation* must be repeated again and again. The mind should be made to work in the same groove as at the beginning to deepen the impression. The Spiral Method is the best if the teacher relies on good explanations to make the subject plain, rather than on repetition of problems.

The personal equation of the teacher is a source of error. The pupils who are with a teacher for several years know about how the teacher thinks, unless he is very original. They understand a teacher's questions better than those of a stranger. The teacher may fall into the habit of stating problems in the simplest language instead of in ordinary arithmetical language. This is an error. The language employed by the hearing should be used. A pupil in mastering a subject must master the language of that subject. A teacher may fall into the habit of asking questions which are easy to reckon. The pupil who becomes familiar with the teacher's way of thinking follows the line of least resistance, and in a majority of cases comes to the correct result without doing any serious thinking.

Pupils should be made *to think,* so that those who simply follow the path of least resistance will all fail. Problems like this should be given: If ¾ pound of meat costs 16 cents, what will two pounds cost? One should not fall into the habit of saying: If ¾ pound of meat costs 18 cents, or 15 cents, or 9 cents; because in each of these questions the pupil will reach the correct result by simply following the path of least resistance, without thinking.

Many problems demanding similar operations should not be given in the same lesson. After two such problems have been done, the pupils see the similarity and from that stage on the work becomes mechanical.

In giving examination tests, the teacher should not give a few easy problems which all can do without thinking. Make every problem one which demands thought, so that those who do not think may fail absolutely, and those who think may make a perfect mark. Some pupils are satisfied with forty or fifty, but they are very much dissatisfied with nothing. Those who do not think should be tremendously dissatisfied. If the thoughtful make a hundred and the thoughtless make nothing, the latter conclude that it is not the teacher's fault, and the next time the teacher presents a subject in a simple empirical way, their minds may not be occupied with extraneous things.

Arithmetic in the advanced grades should be a thought study. Any method which displaces the rational method is a wrong one. The repetition or spiral method, the rule method, and the imitation method must not take the place of the rational method. The teacher must present the various subjects so that the child will get correct ideas and draw correct inferences.

DEFECTIVE HEARING—AIDS FOR ITS IMPROVEMENT.

CHEVALIER JACKSON, M. D., PITTSBURG, PA.

When Dr. Burt honored me with an invitation to say a few words to you on the subject of defective hearing, he threatened most dire vengeance if I exceeded thirty minutes. As you know, we can only touch very lightly on this broad subject in thirty minutes. The subject could not be covered fully in two weeks, but you would not survive my talking to you two weeks, and doubtless Dr. Burt knew that, when he limited me to thirty minutes. I will ask you to for-

give me if I quote "Carry coals to New Castle" by telling you things you already know. I will refresh your memories a little first in regard to the anatomy of the ear (illustrating by drawings upon the blackboard). We have here the auricle or pinna, consisting of the outer portion known as the helix, and within that the antihelix surrounding the concha, which is functionally the most active of this external organ. We have anteriorly the tragus extending inward from this cavity, known as the concha, about three-fourths of an inch in length internally, after that we have a cavity known as the tympanum or middle ear, with a tube leading down into the throat, known as the Eustachian tube. Stretched across this cavity is a little chain of bone. We have first the malleus or hammer resting upon the incus or anvil, whose long process extends downward and articulates with the stapes or stirrup, the foot plate fitting into what is known as the oval window. I have the ossicles themselves here and will pass them around. Possibly some of you may be interested in seeing these little ossicles. We have, then, this portion called the tympanum or middle ear, and another portion called the labyrinth or internal ear. Beginning with the vestibule we have three semi-circular canals: one is vertically transverse, one vertically longitudinal, and one horizontal. We have a shell-like structure extending downward and outward, known as the cochlea. It is a coil of 2½ inches, a cavity drawn in exaggerated scale; there are 2½ turns of the cochlea around the modiolus or central axis. This is divided by a diaphragm known as the zonula ossea laminæ spiralis into two separate canals. Representing that diagrammatically we would have a structure represented by the diagram in this manner (illustrating)—that is, divided by a partition, the laminæ spiralis ossea and the basilar membrane with an aperture at the apex through which there is communication. At this end we have the oval window which I spoke about and which the stapes fits, and we have below another aperture in the bone known as the fenestra rotunda or round window, which is filled with a membrane. This (indicating) is filled with a fluid incompressible as all fluids are. These semi-circular canals (showing apparatus) have had lead put in them for X-ray work. We will ignore that. Now, let us follow for a moment a sound wave striking the auricle or pinna. In regard to the function of the auricle, if it is entirely removed, as occasionally occurs accidentally, the person can still hear, but less perfectly. You would not notice it perhaps in ordinary conversation, but by

applying final tests you would at once know that his hearing was slightly inferior. Functionally the most active portion of the pinna is the concha. The sound waves strike the membrana tympani and set it in vibration. This is communicated through the chain of bone to the fenestra ovalis or oval window. This chain of bones may be entirely absent and the hearing be fairly good. Its function is as a set of levers. It converts a motion at this point of large amplitude and little force into a motion of great force and small amplitude. Within this cavity known as the internal ear or labyrinth is a fluid. The vibration sets in motion this fluid, and if it were without an outlet, being incompressible and in bony walls, of course pain would be produced; but nature compensates for that by putting in a round window, which is the escape or safety valve. The vibrations travel up this cavity, passing through this opening called the helicotrema, into this other channel, the scala tympani, and out by the bulging; the bulging allows relief of pressure into the middle ear. We have in connection with this the auditory nerve, the nerve of hearing. Coming now from the first and second temporal convolutions of the frame, this nerve is distributed to the cochlea on this laminæ spiralis ossea—that is, the end distribution of the auditory nerve. The vibrations set up in this fluid are communicated to these nerve endings and thus is conveyed to the brain the impression of sound. There is food for study of a number of weeks in the structure alone of that organ, but it is not necessary, of course, for us to go into that. I have mentioned the semi-circular canals; they are in no way connected with hearing; they have been occasionally experimentally removed for diseases, and the removal caused no defect in the hearing directly. This entire structure here (indicating) is called the internal ear, this the middle ear, and this the external ear. Now, without going too much into detail, if this (indicating) were unwound and laid out as a plan, this organ diagrammatically would be represented thus (illustrating). It can be likened somewhat to the key-board of a piano. The auditory nerve is distributed into arches or auditory horns and a whole lot of structures that it is unnecessary for us to go into, but every pitch of sound has its structural representative in this organ. There is a structural representative in the cochlea for every different pitch of sound. In human speech we use, as you are all aware, from 460 to about 790 vibrations per second. The ordinary sounds used in music run from about thirty-three to forty-seven hundred. There are in the organ about 4,500 elements.

We have, as you all know, beyond this many sounds of such high pitch that no matter how loud they are they are imperceptible to the human ear; in other words, there is no structural representative for notes of very high pitch. They are similar to the ultra bright rays of light that are invisible to the human eye no matter how intense they may be. That is not true of the other end of the scale, because when you get below 33 the vibrations begin to assume separate impulses. When they get down to 16 they assume separate impulses. Now, I had intended demonstrating on a number of pitches this morning, but my apparatus has not arrived and only one patient has arrived, and he is not a very good one for demonstrating with, although he demonstrates another point very well. As you know, there are in deaf mutes islands of hearing where a certain pitch is heard and absolutely nothing else. They are deaf to all the rest of the scale. I have a few post-mortem specimens showing those anatomical defects. They are only demonstrable under the microscope. Now, we can have defects in any portion of this entire apparatus; never in the absence of the auricle alone, for that is not absolutely essential. It may be in this external ear canal. If it is a result of disease or trauma, they may be separated. It may be congenitally absent. This little child of three years of age was born with a congenital deformity at this external canal. He just has a little mass of wrinkles and cartilage instead of the external canal. That is an example of atresia of the external canal that comes up occasionally as the result of trauma or accident, only, however, when the other ear has been previously lost. It happened in a patient of mine where the other ear had been destroyed in childhood by cerebro spinal meningitis. I was able to open up this canal to enable the sound waves to get at the ear, and now you would never notice any defective hearing in talking to him as long as that ear is turned toward you. This little child cannot be remedied by that simple process. The operation had been tried before the case came under my observation. She was sent in to me afterwards in consultation. The child had really no middle ear and no external canal, though the nervous apparatus was in good order. Now, we may have defective hearing from diseases of this middle ear and under that head comes catarrhal conditions. Occasionally and very frequently there is damage sufficient there to make the hearing very defective. It seldom reaches the extent that the child is unable to be taught by purely vocal methods in the ordinary schools or at least

by a special teacher; but when we come to this internal ear there we have nearly nine-tenths of all defects that approach totality. The cerebro spinal meningitis destroys entirely that whole cochlea; it just breaks down and runs out into pus. There may be neuritis where this nerve passes through the skull. It passes through the dura and also through the arachnoid, and the membranes are so violently inflamed in this disease that inflammation is communicated to the nerve, and it is just simply as if it were cut off there, and, of course, the case is utterly hopeless and utterly irremediable.

I have made notes of a few points that I will hurry through rapidly. (Here Dr. Jackson reads his paper on defective hearing.)

Dr. Jackson paused in his reading to make the following remark: "I think this is important: Operations should be sanctioned only when imperatively demanded."

At another point the speaker paused to say on the subject of suppuration:

"I was once in an institution devoted to the treatment of deaf children. It has been a good many years ago, and things were not in the state of perfection they are today; and I was in one today where there were eight deaf children, the foul odor from whose ears I could smell from quite a distance; that is not only a menace to what hearing may be left, but what is vastly more important it is a menace to the child's life."

At another point Dr. Jackson paused in his reading to say: "Undoubtedly the use of very loud sounds may work a positive injury and set up degenerative changes, and what little hearing remains may be lost."

On the subject of aid apparatus Dr. Jackson said: "I am speaking strictly from the point of view of an otologist. I am not talking about the educational part of the matter. I am thinking of the degenerative nerve changes and also the imperfect sounds that may reach the ears, made still more imperfect by any form of aid apparatus. Now, I will say a few words in regard to aid apparatus. At the outset we have to admit that there is absolutely nothing in otology that is the equivalent of the glasses of ophtholmology. Any credit for such an apparatus is rampant quackery. It is not only quackery, but it may work a positive injury, not only an injury of omission but of commission. You are known for your interest in this kind of work. The ear drums and one contrivance or another that is put in the ears of children or of people, who have some hear-

ing, very frequently set up trouble that becomes in time absolutely incurable and works an injury. Of all this aid apparatus, its use and teaching I know nothing. I would suppose that it was very much inferior to the natural voice of the teacher, if the natural voice could be heard. There is besides, of course, a decidedly objectionable character given to the sound by any form of aid apparatus. The aids take a number of different forms. We have what is an exaggerated auricle and those are ranged as sound collectors. The simplest form is, of course, the hand held up to the ear, which is of great benefit in very minor cases. Then we have all sorts of horns and funnels. I have a collection of them here that I will pass around. Another form is the dentiphone. Some of the tubes are of some use. Perhaps the most useful of the sound collectors is the so-called otophone. Now, those are all collectors of sound waves. The great fault in all of them—I do not mean by that that I am going to bring something without a fault, for there is no such thing—but let this (using the blackboard) represent diagrammatically the speaker's mouth. The sound waves radiate from that practically in every direction, and the law of the scale of the distance comes in, as you all know, and the portion that meets the auricle is only a few waves. These funnels take in a few more of these sound waves, but do not intensify them. It is claimed for that one tube that you pass around that it is a mechanical intensifier. It is to some extent, and it has this merit that it has no battery to get out of order.

DR. WESTERVELT: Is that the Ailsworth tube?

DR. JACKSON: No; that is the otophone.

DR. WESTERVELT: Do you think the Ailsworth tube is better than the otophone?

DR. JACKSON: The Ailsworth tube does get out of order, the otophone does not. These funnel-shaped arrangements depend solely on the voice for their operation.

I merely want to accentuate one point, and that is in regard to all these different forms of electrical apparatus: Instead of talking directly into the ear the talking is done against a plate, and that plate is set in vibration. Now, in irregular and intermittent contact with that is a wire extending to a battery. We have in this battery a plus and minus pole as you all know. Another wire is brought down here and is run through the receiver which goes to the listener's ear. All the voice does is simply to operate this diaphragm

as a key. It is used as a key to turn off and on and produce changes in your electrical contact, which is reinforced by the battery which sets them in very active vibration, so much so that the louder forms of battery power are a positive injury to the ear, either the normal ear or a defective ear. I think it is very questionable whether you will be able to get much use from anything of that kind. All this electrical apparatus is surrounded by so much commercialism and quackery that I hesitate to speak about it. These people have promulgated them as a cure for the deaf and all kinds of rank nonesense. It is undoubtedly an aid to people with defective hearing; but it has another disadvantage, and that is that those batteries are continually out of order, so much so that they are almost never in order, and I approach the machine this morning with some hesitation, for it very likely won't work. You will have to take my word for it that it does work when the batteries are fresh. I think for institutional work, if it is ever used at all, it ought to be connected with a large body of electrical supply, so that the continued nuisance of batteries would not come up.

DR. CROUTER: I would like to ask one question: When should mechanical aids be introduced to the exclusion of the unaided voice? When would you recommend that we call to our assistance these mechanical aids?

DR. JACKSON: Never, if they can hear the voice, I think.

DR. CROUTER: You would not recommend then the introduction in schools for the deaf of these mechanical instruments?

DR. JACKSON: Never, if they can get the advantage of the voice in perfecting their speech. If they can hear the voice without it, I feel sure that not only will not much aid be received from them, but I think there is a little disadvantage in using them, certainly for longer than a few minutes at a time. I think there is a positive injury to the nerve of hearing.

DR. WESTERVELT: Would the use of the ear tube produce any similar injury?

DR. JACKSON: I think it is very much less likely to. We have in the ear tube a long elastic column of air extending through its entire length. You all know the elasticity of air columns, and it is very much like a telephone receiver, only it is very much intensified; otherwise it would be useless. In those violent vibrations close to the ear where there is a very small column of air, there is very little room for cushions, and I think, as a consequence, they are much

more injurious than any form of ear tube that has a long elastic column.

DR. WESTERVELT: May I ask, would a continued use of the telephone tend to injure the normal ear?

DR. JACKSON: It has a slight tendency to do so. I had a very interesting time several years ago in examining 50 telephone operators on the exchange who were constantly using the telephone, and there is a very appreciable deterioration of the hearing. What it is going to be after 25 or 30 years of that work, of course, I cannot determine, but tabulating and analyzing those 50 cases there was a little degeneration going on in the nerve of hearing from the continual influence of the use of the telephone; but there is that difference which I just spoke about: In the telephone you have an exceedingly gentle vibration. With this you have what is really not a telephone but a microphone. You have an intensification of the sound due to that battery power and to this, being on the direct current, and they say magnifying the sound, but it is simply using the battery power instead of the ordinary voice power. It is that intensity that does the injury.

DR. WESTERVELT: Would it be desirable for us instead of using this to use the ordinary telephone as a series of class-speaking tubes?

DR. JACKSON: Oh, by all means, if the pupils could hear it. I should say it was very much more advantageous than not to use anything of this kind.

MR. BOOTH: If a deaf pupil can hear through a telephone, has he any business in a deaf school?

DR. JACKSON: You know more about that than I do.

DR. WESTERVELT: In our school we have fifteen Bell telephones, and the teacher can speak through them all at one time. Two or three of our pupils have seemed to have their hearing quite a little improved through the use of this ordinary telephone. It is connected with a storage battery that runs our clocks and everything else, and whatever battery power it needs it uses from there. We use the transmitters, the regular long distance telephone. It has seemed to one girl especially, in about 25 or 30 times of using this telephone, to improve her own speech very much. She got through the telephone what she had never been able to get before through ordinary hearing: she got an understanding of inflection and of modulation; and there were one or two others that were improved somewhat. I did not want to use the telephone, however, in that way, if it was going to be harmful to the children.

DR. JACKSON: That is a very important point, and I am glad it was brought out, because my remarks might have been very misleading. What I meant was that the prolongation and continuous use of the telephone, such as the telephone operators have, being eight or ten hours a day, with that receiver buckled right on to the ear, that it did work some degeneration to the ear. I do not think the use such as just mentioned would work any injury to the ear. I think it is just the contrary. I think that any exercise—the physiological exercise by a nervous apparatus as well as a mechanical apparatus is a positive benefit; but as I understand it, with reference to those pupils, most of the time their ears would be at rest because they could not hear sounds; so that they are getting altogether too much rest and really need exercise, and that the telephone would do, and the use of it three or four hours a day in people of defective hearing, I think, would be a positive benefit and not an injury.

MISS YALE: How would you compare the value of these hearing tubes with an ordinary picture roll—a roll of paper? How much better are these than that?

DR. JACKSON: That is a question I cannot answer, but just in general I would say that with all these different forms of apparatus the only way to determine which is the better or which is the best is to allow them to try one after the other serially. What one individual would claim he can hear with exceedingly well, the other one will claim is very much inferior. It varies so much with the individual; but I think that is a most excellent suggestion. I have no doubt but what you could roll a piece of paper that might be very much better than these in many cases.

MISS YALE: One of our best New England authors claims that that is safer and better than any of these speaking tubes except in exceptional cases.

DR. JACKSON: It certainly would be more cleanly, and I think would be a great advantage.

SPEECH WORK FOR OLDER PUPILS.

KATE H. FISH, GALLAUDET COLLEGE, WASHINGTON, D. C.

An unnecessary amount of skepticism exists in regard to the value of articulation instruction to the adult deaf-mute. In early childhood, it is claimed, the organs of speech are more flexible than in later years, the voice is more natural, while, through discipline by the teacher's absolute command, regular practice-work may be secured. Moreover, the skeptics say, only a comparatively small number among the deaf seek a higher education. Why hamper a college course with beginner's work in speech? Learning to say "cat," in the eyes of some critics, ill accords with the dignity of Latin and higher mathematics.

The first three of these objections to articulation instruction for the adult deaf have some force. As far as work for the teacher goes, the task of giving, correcting, and keeping up speech is in some respects more difficult than that of teaching little deaf children to talk. I know whereof I speak, for I have taught both young and older deaf pupils many years. When all is said and done, every conscientious articulation teacher knows, and rejoices in his heart, that he is the humble means to a great end. The poorest results that such a teacher obtains are valuable—the best are a joy both to him and his pupils.

To the adult student, the work of learning to speak is far less laborious than is usually asserted. In the first place, in the case of the older pupil, we have the great advantage of his intelligent co-operation. He wants to learn to talk or he would not be in the articulation class.

It is true that the organs of speech are more pliable in early youth. Nevertheless, constant practice in scientific lip and tongue gymnastics will soon limber the speech apparatus of any deaf adult. Voice culture, too, must be constant and most painstaking.

Just here I wish to call attention to an important matter. The accusation sometimes made that college life fosters a disregard of articulation is not well founded. Usually the cause lies farther back in the secondary schools. The fact that articulation is not included among the subjects of examination for entrance to Gallaudet seems to have led, in some schools, to the custom of dropping speech-work when the higher grades are reached. In other words, ceasing to attend the speech class may well be considered by the deaf pupil a sign of promotion. The moral and intellectual effects

of this unwise arrangement are obvious. Contempt on the part of deaf pupils for the most important means of communication between themselves and the world is thereby naturally engendered. Every year some students, entering Gallaudet, refuse to take up speech work in spite of the fact that they might make good talkers and lip-readers.

My experience in teaching older deaf pupils has been confined mainly to Gallaudet College. This paper, of necessity, must deal largely with difficulties encountered there. At the outset, however, I wish to disclaim any intention to criticise harshly the work of articulation teachers in the schools from which students come to us. On the contrary, I gladly take this opportunity to acknowledge the excellent speech and lip-reading secured in many of the schools. Certain defects and negligences, though, in certain quarters, I am obliged by truth and justice to point out. My position as chief articulation teacher at Gallaudet brings me into contact with speech-results attained by teachers from every state in the Union. The articulation status of students who come to us ranges from the harsh rudimentary sound made by the wholly untaught to normal speech. At the present time, though, the number of students who have had no instruction whatever in speech is small. In addition to this small number of the previously untaught, I will speak of,

First, those who have had one, two, or three years of speech work in the state or other schools and then dropped the subject entirely. Second, those who have been nominally taught in classes so large that the articulation teacher was unable to do justice either to himself or his pupils. Third, the neglected semi-mute.

Of these four classes, I find the first (that of the wholly untaught) easiest to deal with. The student who has never spoken comes prepared to do exactly what I tell him to do without the irritating self-conceit of slightly informed ignorance. He has no incorrect ideals of speech. He unquestionably accepts his teacher's standards of lip and tongue positions. Given such a student of fair natural ability, success is almost sure. The following is a case in point: A. had spent eight years in a state school for the deaf, but had received no instruction in speech or lip-reading, because, it was said, his parents were opposed to articulation. In the light of his progress at Gallaudet it seems a great pity that the authorities of the school did not attempt the conversion of the boy's unwise parents. In teaching him I depended upon language—never showing him a position until he had tried hard to get it from verbal description. Of

course I made the sounds for him after he had approximated the correct positions. I criticized him freely, pointing out his defects to my normal class. A. was very patient and persevering, following prescribed drills with intelligence such as a younger pupil could not have commanded in the way of self-help. Before the Christmas holidays this young man was able to read many easy sentences. While at home, during Christmas week, he displayed his new accomplishment of speech to the pride of his relatives, who understood him without any difficulty. Returning to college, he continued to improve and now talks well. He reads his mother's lips quite easily, but complains that his father's mustache is a hindrance to him in understanding. He has asked his father, he says, to shave off the offending mustache, but his mother declares she will get a divorce if her husband does so. In fact, A. reads the lips better than some who have had years of practice. He tells me that he talks to his friends constantly. He invariably stops to speak to me even when he is hurrying to a base-ball game. He talks smoothly and with continuity of sound. His voice is pleasant.

Another case which should have received earlier attention in the school from which she came is that of a young woman who entered college last September. She did not put her name down as a candidate for articulation instruction, although, I was told, she had considerable hearing. She had never been taught to speak. Always interested in such cases, I took especial pains to smile at her and make friends with her whenever she passed my class-room door. At last she said she would like to take articulation lessons. My own classes were then full, but I placed her with a normal student working under my direction. The girl (Miss W.) was not optimistic. She had little faith, indeed, that she could ever learn to talk. She was twenty-two years old. We found that up to the age of fifteen she had been wholly deaf. At that time she began to hear, but the authorities of the school in which she then was failed, apparently, to take advantage of her new power of hearing. We tried at first to teach her through her hearing, but were forced to abandon that plan. The task was too hard for a novice, like my normal student, and I then had no time to teach her myself. Therefore, I directed that she be taught just as a deaf person without any hearing is taught to speak. Vowels and consonants were obtained solely from imitation and direction. Her voice was extremely harsh and gutteral. She learned, though, most of the sounds, many words, and some short sentences with her normal instructor. Then I made

a place for her in one of my own classes. I decided to use the hearing tube. She had no conception of the meaning of sounds uttered through it. At last she began to hear the vowels, and then many of the consonants. Her hearing (or, strictly speaking, her ability to comprehend sounds) has improved daily. The quality of her voice is better. Fluency is developing, and I am confident that after a year's instruction, she will find no difficulty in understanding ordinary speech, or in making herself understood. Of the immense value, throughout her life, to this young woman of the speech instruction she has received at Gallaudet there can be no question. In her case, and in others, the college has performed rescue work. In reality, teaching the adult deaf to speak and to read the lips successfully is always rescue work.

Of the next class—those who, after receiving considerable articulation in oral or combined classes, drop speech instruction entirely—we have many instances. In fact, it appears to be the rule in some schools to put all beginners into an oral class. Many of these children are dropped later from the class—not always, it would seem, with good and sufficient reason. Too often, a deaf child's own whim decides whether or not he shall continue in an articulation class where he rightfully belongs. Again, the oral classes become overcrowded and almost any excuse is accepted to reduce numbers. At all events, it is certainly true in some schools that the children who drop articulation are not dull or backward mentally, as is often claimed when such changes as have been described are made in classification. According to their own testimony, some of our brightest young men and women at Gallaudet were thus dropped from their articulation classes. Their vocal organs are normal. There is no apparent reason why they should not be good talkers and lip-readers. Every year I admit such young persons to my classes with gratifying results. Many of these young people, graduating, acknowledge gratefully that among the benefits which they have received from Gallaudet College the gifts of correct speech and lip-reading are by no means least. But some among this class of students are hard to deal with. During the years in which their speech has been neglected they have fallen into a jargon which justifies Mark Twain's remark of the extremely knowing young man in "Innocents Abroad:" "When B. uses a long word, what he means to say is a mystery between himself and his Creator." Such a student usually has a fluency of utterance only matched by the volume of his self-conceit that his speech is agreeably perfect. When convinced,

finally, to the contrary, he is apt to become fearfully discouraged, so that, in meeting conceit and trying to keep up the student's interest in articulation, the teacher finds himself between the devil and the deep sea. First of all, such a pupil must be taught to hold his vowels steady. He must stop making superfluous positions. He must be shown how to connect sounds closely. He must take position before he gives sound, and stop sound before changing position. It is better to make him pronounce each word by itself than to try to keep up continuity of sound in sentences at the expense of distinctness. If a student such as I have just described is in dire earnest, he may be helped to talk respectably. But *undoing* is slow and unsatisfactory work to any articulation teacher. It is almost heart-breaking work when the teacher reflects that his adult pupil was once properly started in speech but has been allowed to lapse.

It may seem rather inconsistent to follow an account of one student sorely handicapped by being *dropped* from articulation by an equally harrowing example of *another* seriously harmed by being *retained* in an overcrowded class. The moral, however, of this paradox is *more* and *smaller* oral classes.

I have in mind a certain young man who came to us last fall directly from an oral class in which he had been eight years. Certain inexcusable faults of speech have become habitual with him. For instance, it is absolutely necessary for every articulation pupil to memorize many words in common use which cannot be classified under any rule of phonetics. The young man of whom I am speaking invariably says "walk," "talk," "should," "would," etc., *with every "l" sounded.* The smallest deaf child is supposed to quickly memorize the pronunciation of the words "have," "love," "put," "full," etc. Such memorizing B., though a bright boy, has apparently never practiced. The letter c is a bugbear to him. He should have learned long ago when c takes the sound of s and when of k. He does not know that the past tense of a verb ending in t or d is ed. He practically doubles his t's and d's, thus producing a convulsive sound which usually alarms the *unitiated* listener. This young man is now painfully conscious of his speech defects. He says, frankly, "I know I speak very badly." I am doing the best I can for him, but I cannot help regretting that he was not earlier taught to work intelligently in his own behalf.

The neglected semi-mute is numerously represented at Gallaudet. Sometimes he is the product of a succession of private teachers, some of whom have been capable, others incapable. Some-

times he comes from a public school where teachers lacked either knowledge or inclination to deal with his speech needs. By the way, the study of elocution, understood by many teachers of the hearing, never seems to help out these same teachers when they happen to have a hard-of-hearing child or imperfect speech in their schools. The reason is that the teacher of elocution has himself only a vague idea of a few vowel positions. I instructed, at one time, a young woman who had for several years been studying with one of the best teachers of elocution in the city. She had taken breathing exercises galore, but her voice was weak and she realized that she needed a foundation work that she had not had. I gave her all the positions, working especially with the consonants. When the muscles of lips and tip of tongue were strengthened, her voice became stronger and its carrying power greater. Nor are some schools for the deaf without blame in regard to their treatment of the semi-mute. Too often he is left practically unheeded so far as his speech is concerned. The *naturalness* of his talking covers a multitude of sins of vowel and consonant omission and commission. He *seems* to talk so easily that the busy teacher of congenitally deaf pupils hardly notices his gradual lapse from normal speech. Now and then a semi-mute reduces the skilled articulation teacher to the verge of nervous prostration by his earnest arguments in favor of his unique pronunciation. "How can people hear the final consonants," he asks triumphantly, "if I do not put voice into them?" So he says, "man-u," "cat-u," etc. "Nobody opens the mouth as you tell me to," he declares. Therefore his jaws are set and his voice, coming through strained vocal cords and set mouth position, is anything but pleasant. Under such conditions, no wonder the world sometimes criticises the voices of the deaf unfavorably.

The examples I have quoted are not exceptional. They are typical of difficulties encountered by every teacher of adult deaf. I realize only too keenly how far from perfect is my own work in this direction. Discouragement often descends upon us all. Our work is hard. Nevertheless, the truth remains that we are called of God. Every deaf child has a right to be taught, either early or late, to use his organs of speech. Here the old proverb is emphatically true, "Better late than never."

HOW BEST TO SECURE INTELLIGENT SPEECH FOR DEAF CHILDREN.

MARY MCCOWEN, CHICAGO NORMAL COLLEGE, DEAF DEPARTMENT, CHICAGO, ILL.

Could we limit ourselves in this discussion to speech as co-ordinations of the vocal organs or articulations, the problem would be comparatively a simple one. But speech for the deaf, as well as for the hearing child, is but a medium of expression, and for its value depends entirely upon preceding steps.

Baldwin says: "Receptive speech involves an impressibility of the ear and eye, a recognition of the particular sounds or speech symbols used, and an intelligence and training sufficient to appreciate their significance; while the complete act of speaking involves a capacity to think or formulate ideas, the ability to recall and construct the words which express the ideas, and the actual articulation of conventional sounds."

This being true, it is obviously impossible to consider speech as a matter alone, apart from other activities of the mind and body, and a brief discussion of the processes involved in the acquisition of language in all its phases by a hearing child will give us the relation which speech bears to language in general in its normal evolution and development, and a basis for comparison, both as to processes and result obtained, in our attempt to give deaf children intelligible speech.

The condition of a hearing babe is well described by Tracy, who says: "The little child is, as it were, in possession of the machine, but the belts have not yet been adjusted to the pulleys, nor has he yet learned to handle the instrument. Speech for him is a potentiality though not an actuality. The inability to speak is not an abnormal state at the beginning of life, any more than the inability to write, or swim, or play the piano. It is merely an imperfect state, but a natural condition out of which he will rise."

In the complex process of learning to speak, which Compayre characterizes as the highest act of human evolution, the hearing babe passed through a number of steps or stages, all of which involve the possession and coöperation of certain physiological organisms and intellectual faculties.

Surrounded as he is by a world of sound, the instinct for speech asserting itself in inarticulate baby babblings, ever present stimuli inciting him to spontaneous utterance, with a constant stream of im-

pressions registering on the cerebral structure long before consciousness asserts itself, the child slowly but gradually adjusts himself to his surroundings, after a multitude of repetitions begins to interpret what he hears, and later, as these language symbols crystallize in consciousness, begins to imitate words more or less crudely, but with spontaneous self-expression as its ultimate end or goal.

The process which we have thus so briefly outlined generally covers a period of eighteen months or more in the average child's life, and fully twice as much time is required before he has mastered his limited childish vocabulary with even a moderate degree of accuracy.

To reiterate: A long period of preparation in the reception of sounds and of spontaneous articulation precedes the interpretation of the speech of others; another period of longer or shorter duration, according to the individual characteristics and general environment of the child, precedes the definite imitation of heard language, and still another period precedes the spontaneous use of language as a means of self-expression.

Now, as to the speech of the hearing child, and its growth in definiteness and intelligibility. In his instinctive baby babblings, when he is simply playing with his voice for the sake of the pleasure in the activity, he unconsciously forms more or less perfectly all the elementary sounds and their combinations.

Later, he imitates or tries to reproduce the sounds about him, largely, if not altogether, without thought content, and therefore still for the sake of the activity. Before he has learned to really understand or definitely interpret individual words, he shows that he is awakening to the value of language as a medium of communication, from the fact that he calls attention to himself and expresses his various wants by certain sounds or syllables, which to him are unmistakably language.

He later understands language—some words—quite definitely long before he himself uses a single word. His first efforts at articulate speech are crude, and one word is made to do duty for a sentence expressing a complete thought. "Up" means "take me up," or "I want to get up." "By-by" means "I want to take a walk." etc., etc. His inarticulate baby calls are perfectly intelligible to his mother, or the nurse who is with him constantly. As he learns to talk more freely, he may lisp or stutter or stammer, he may substitute or transpose sounds, his articulation in other respects may be very faulty,

but if he understands language, and can answer a question and reply intelligently when addressed, although his speech be far from perfect, it is said to be intelligible.

In like manner, a foreigner learning English may omit entirely certain sounds and maltreat others, may transpose words, mix modes and tenses, and otherwise abuse the English sentence, but with it all, if he makes himself understood, he is said to have intelligible speech.

We find, then, that speech which is the very flower of language, but of which there is no acknowledged standard of absolute perfection though many and varying degrees of intelligibility, speech, intelligible, even very imperfect speech, comes to the hearing child only after a long period of mental and physical growth, training, and development. We find also that the period of imperfect speech, of barely intelligible speech, is but one of many stages which must be passed by all on the road *toward* perfect speech. And that while no one is satisfied to leave the hearing child in this imperfect stage, in spite of continual efforts to overcome inaccuracies and mistakes where they exist, in many, many cases imperfections in speech do actually follow the hearing child through life.

Now, let us turn our attention to the child born deaf, of whom, in the beginning, it may as truly be said, in the words of Tracy, speech for him is a potentiality though not an actuality. He is, as it were, in possession of the machine, but the belts have not yet been adjusted to the pulleys, nor has he yet learned to handle the instrument. The inability to speak is not for him any more than for the hearing child an abnormal state at the beginning of life, any more than the inability to write, or swim, or play the piano. It is merely an imperfect, undeveloped state, but a natural condition out of which he, too, may gradually rise.

In his case, however, one important pulley is lacking in the machine, and there will have to be a readjustment of the belts, but if this be done early enough, work can proceed very smoothly though somewhat retarded, especially in the beginning. The steps between the condition represented by "no speech" and "intelligible speech" are for him identical with the steps taken by the hearing babe in covering the same ground. He, like the hearing babe, is surrounded by a world of sound, and in him the instinct for speech asserts itself just as surely in baby babblings. Sound stimuli, which are ever present, fail, however, to reach him, and only sight impressions are registered on his cerebral structure, resulting in a much slower mental quickening and development. The language or speech by

which he is surrounded cannot reach his consciousness and cannot, therefore, awaken a response in either interpretation or imitation of spoken words. The insistence of his wants, however, demands expression, and he uses both voice and motions, the former less and less frequently as the months pass, and the latter more and more freely.

With equal intellectual possibilities, he can never develop unconsciously a knowledge and use of language and speech as does the hearing babe. Since this is true, to what extent and how can we apply to advantage the laws deduced from our study of the normal, hearing child?

In developing a plant much can be done by cultivation, but in doing this the specific laws governing that plant must be followed. Burbanks secures his wonderful results not through any occult power of his own, or through any method devised by himself of compelling nature, but because he has stolen mother nature's own secrets and assiduously follows her laws governing plant life and development.

Now the defect of the deaf child is wholly of physical origin, and although the result of this defect is many times more serious than were it a missing limb or a crooked back, it does not interfere with the fact that all the functions of both his body and his mind are subject to the same laws that control the growth and development of the hearing child. We find that he does laugh when he is amused, cries when he is hurt, investigates by pulling to pieces whatever is within his reach, learns to perform all the physiological coördinations by repeated attempts when he has reached the proper physical development and is confronted by a sufficiently strong motive for action, and our aim in giving him an education, and especially in giving him language and speech as a basis for education, should be as nearly as possible to work along nature's own laws.

To begin with, we should supply conditions that will enable him to get through conscious effort what, because of his deafness, he cannot get unconsciously. We should surround him by language which he is led to see, and allow him to enjoy the full period of impression—that is, of seeing, understanding, and growing into a knowledge of language through its use—before we insist upon accurate analytical articulation.

We should not only help him to acquire language through its use, but should allow him to know and speak words and sentences, even though imperfectly, when used as the symbols of thought and

as a means of spontaneous self-expression. We should not, however, be satisfied to leave him with his foot upon the threshold, but should make use of every possible opportunity in daily companionship during the natural activities of home, and early school life, to help him extend his knowledge of language, enlarge his practical working vocabulary, and gradually, through conscious imitation and suggestion, to help him correct his inaccuracies in articulate speech. When this point is reached, his future education can proceed along more natural lines.

If this can be done for the deaf child, the question of questions should be, when can it best be done, when should it be done? One of nature's most insistent laws is, to follow the line of least resistance. Water does not like to run up hill. If there is a best time, should we not use that time whenever possible in giving a little deaf child language and speech?

In its early infancy, only an expert is able to discover deafness in the babe, and the break in the normal development of speech in the deaf child first becomes evident only when he passes from the stage of instinctive babblings to the period when his unconscious articulations should begin to be translated into conscious speech.

This break is not due altogether to inhibition from within, but largely to a lack of sound stimuli, and also to an actual inhibition from without, as his noises, when uncontrolled, become more and more disagreeable to those about him.

Where it is possible to lead the deaf child in infancy to see and learn through seeing as his brother learns through hearing, before this conscious break in his life occurs, a natural process of development, although markedly slower, may be built up and the child be given language and speech through its use, as it is acquired by a hearing child.

These conditions, however, are rarely possible, and in school we must take the deaf child just as we find him, occasionally at 5 years, more often at 7, 8, 10, or 12 years of age, more or less out of harmony with his environment, with natural tendencies ofttimes dwarfed or warped by an excess of either attention or neglect, with faculties dormant or but partially developed from lack of natural reaction during this long period, but, notwithstanding all this, still responsive to and governed by the same laws of growth and development that control the hearing child.

The steps in speech giving and speech getting with the word as the symbol of thought and the most efficient avenue or medium both

for impression and expression have been enumerated and elaborated, but it remains to emphasize the point that during the formative language period, while the teacher who should be trained in the sciences of Psychology and Pedagogy and an expert in the analysis of sound production taking note of the errors in the child's imitative utterance, by a series of systematic exercises, vocal gymnastics as it were, strengthens the physical mechanism where weak, making possible and easy correct vocal coördinations, aiding the child through rhythmic work to gain an appreciation of the rhythm or movement of speech, the thing that is a most important factor in securing intelligibility, training the hearing where even a very little adds to the success and ease in modulation of tone and as additional avenues of expression, proper incentives to thought and spontaneous speech, uses drawing, modeling, painting, making objects in paper, cloth, leather, tin, wire, cardboard, wood, or any material that will best embody the thought. All this making and doing in material expression quickens the mind and strengthens the body, thus enhancing the possibility of more and better speech, and later, when the child has reached a more definite stage and requires more exact expression in more formal occupation, manual training, including not wood work alone, but more advanced modeling or pottery, sewing, basketry, and domestic science, are direct and legitimate incentives to practical language, more definite, exact articulation, and more and more intelligible speech.

To reiterate all this making and doing and material expression leads in every grade directly and inevitably to better physical coordinations and through this to better coördinations of the vocal organs and hence more accurate speech, while at the same time it forms the habit of doing, of pleasure in doing well, a valuable asset for a deaf child—for a deaf person, however well he may speak, who can do nothing valuable in the world is no better than the hearing person of the same useless type.

THE CLASSIFICATION OF PUPILS AND METHODS OF INSTRUCTION PURSUED IN SCHOOLS FOR THE DEAF IN DENMARK.

ANDERS HANSEN, SCHOOL FOR THE DEAF, NYBORG, DENMARK.

When the President of this Association, Dr. Crouter, some time ago invited me to read a paper at the meeting in Pittsburg, on "The Danish Schools for the Deaf and their Organization," I felt myself

greatly honored and accepted it, hoping the subject might contain some details of interest for my colleagues on the American side of the ocean.

Regular instruction for the deaf was commenced a little earlier in Denmark than in this country, as its first school was opened in Copenhagen in 1807. A surgeon, Dr. Castberg, was by the government sent to Paris to study the methods employed in the national institution there. After his return he was appointed as principal for the newly erected state institution. Dr. Castberg adopted the French sign method in his school, but simplified it slightly, similarly to what Dr. Gallaudet did in America.

For a good many years this school was able to accommodate all deaf-mute pupils from the whole country, the term for compulsory instruction at that time being shorter than later on.

Compulsory education for deaf children was introduced almost from the beginning, namely, since 1817, Denmark thus being the first country in the world legally insuring the deaf child the right of education.

It took almost half a century before any essential change in the work for the deaf took place in Denmark. A young teacher, Mr. Dahlerup, undertook, in 1850, a voyage of study to several German schools for the deaf, and came back a converted disciple of the oral method, of whose superiority to the silent he was convinced. An *oral class* under his charge was then established in the institution in Copenhagen, but Dahlerup found the conditions were not satisfactory for successful work, and he resigned and started a small *oral school* on his own account. Some few years later he left this work to enter the clerical profession, and he sold the school to a young, energetic man, Prof. J. Keller, under whose guidance it soon prospered. He soon made an agreement with the state to receive a certain number of state pupils—*mostly semi-deaf and semi-mute*—to be educated after the oral method, this being the most beneficial for that class of afflicted children. As time went on the institution in Copenhagen proved to be too small to accommodate the rest of the deaf children from the whole country.

The government erected a new institution in Fredericia, in Jutland, in 1881, where Prof. George Jörgensen, a teacher of the institution in Copenhagen, became principal. He had been in Germany and Switzerland to study institutions for the deaf, and he returned a most ardent believer in oralism, and became a distinguished champion for that method for a lifetime in Scandinavia.

His institution adopted also the boarding-out system of its pupils in private families (externate), to bring them in constant and close touch with the hearing world. The ministry resolved that the best gifted part *among the congenitally deaf* should be placed in this school and *educated after the oral method.*

In 1891, Prof. Keller's private school was transferred from Copenhagen to a provincial town, Nyborg, and made a state school, with Dr. Forchhammer as principal. The institution in Fredericia was enlarged at the same time. It was resolved that a greater proportion of the congenitally deaf should be taught orally there. In order to insure success to the work, the school was divided into two sections: the A department for the brighter pupils, and the B department for the medium gifted, each branch pursuing a special course of instruction.

Moreover, a preparatory department was added to this institution, where now all the small pupils from the whole country pass their first year of school life: to be tried, classified, and taught the elements, before they, the ensuing year, are ordered to that institution to which their mental qualities may destine them.

After the death of Prof. Jörgensen, in 1904, the A department was separated from the main institution and transformed into a self-dependent institution.

The present state of things is then as follows: compulsory eight years' instruction, beginning at the child's eighth birthday, for all children too deaf to profit by the teaching in the public schools for the hearing. After one year's stay in the preparatory school in Fredericia, the ensuing seven years will be spent in one of the four schools: Nyborg, the semi-deaf and semi-mute part; A school in Fredericia, the best third among the congenitally deaf; B school, also situated in Fredericia, the medium gifted third of the congenitals; Copenhagen, the less intelligent, C pupils, congenitally deaf, who are taught manually and boarded in the school.

In addition to this grouping a *special class for feeble-minded congenitally deaf* is connected with the institution in Copenhagen, and another *special class for feeble-minded semi-deaf-mutes* is going to be added to the school in Nyborg.

Education, board, and clothing, medical care, etc., are entirely free to all children whose parents are not well-to-do. If well off they have to pay $75 annually for all provisions; the state pays the rest, the annual expenses per pupil being about $225.

It deserves to be mentioned that government and parliament always have given liberally for the support of the schools for the

deaf, where, for instance, the teachers' salaries are much better than in the public schools.

Classification.

The first condition for success in our work with the deaf child is to have the necessary time for instruction to our disposal. This is, however, not definite, but conditional. Very much depends upon the special proceedings we choose, to reach into a mind to which the main avenue for the acquirement of language and knowledge is choked. Another very important factor, not seldom more or less overlooked, is the necessity of conformity of the material a class is composed of; the more incoherent it is, the more time and strength we waste. The greater conformity there exists between the different individuals in a class, the better the work will go ahead and the easier it is to adapt the form of teaching to the children's capacities. Is the class a heterogeneous assemblage, it is unavoidable to lose that precious time and strength, which should secure us success, and, at the same time, both ends of the class suffer: the *bright* pupils *get tired* of the endless, and for them unnecessary *reviewing,* and the dull ones *give up applying themselves;* the difficulties surpass their power, they believe; the pace is too fast, and the solution their spiritual food is prepared in is too intense for their mental constitution.

In order to further and to facilitate the work in the schools for the deaf in that comparatively short time the pupils are under instruction, *a classification* of them *has for many years been in existence* in several countries in Europe renowned for high educational standards: *Norway, Sweden, Denmark, Finland,* and *parts of North Germany.*

The question of classifying *hearing children* in at least two groups was even recently raised in Copenhagen, and recommended by influential school authorities. It failed, however, at this time to be adopted, not because of want of heavy arguments from the teachers' side, for the high pressure under which they are worked provided ample proofs, as a certain number of pupils simply are overexerted.

I have no doubt that public schools, there and elsewhere, some time in the future will introduce that reform, when all interested parts have realized that the best instruction for any child is that not surpassing his power, and that each child ought to have an individually adapted education; this demand being impossible for the public school to supply, that pedagogy, agreeing most with this principle, is the most perfect and consequently the preferable.

When even the ordinary school admits the expediency of classification of its pupils, it seems rather surprising that the system has not yet been adhered to to a greater extent *in the school for the deaf,* where it is to be expected that pedagogical ideas have attained a higher degree of evolution.

A special feature of the Danish organization is the *seclusion of the semi-deaf-mute element from the congenital.* The great physical difference existing between these two categories justifies this arrangement. Assembled in a special school, these children can get an education more answering to their special qualities and capacities than if placed among the born deaf.

When visitors from abroad come to the school in Nyborg to study, they generally declare they find a *noticeable difference* in the manner in which these pupils *act, move,* and *play,* compared with what is to be seen in ordinary deaf schools, where the congenitally deaf are dominating.

I have had similar experience in schools I have visited *on both sides of the ocean.* It seems as if the semi-deaf-mute element of a school disappears or is absorbed in the midst of real deaf-mute surroundings, and the individual at least becomes more "deaf and dumb" than his natural capacities compel him to be.

If a farmer has soil of different qualities, he has to conform his cultivation in accordance to them, and he will give each section a suitable fertilizer and raise various kinds of crops, if he be a wise man of modern scientific training. And the farm will certainly yield its owner a good reward for his toil and skillfulness. If teachers, both of the deaf and the hearing, are desirous of obtaining the highest yield from the energy given out both by the teacher and the taught, that farmer is worthy of imitation.

Recently returned from a tour of study in several American institutions for the deaf, my impressions therefrom have hardly yet had time to segregate and crystallize. However, I am persuaded, by what I had the privilege of seeing, that *the work* for the welfare of the deaf, *already accomplished* in that beautiful and prosperous country, *is wonderful,* and is still continually in progress and evolution. In regard to the education of the deaf this country *has already left Europe behind* in more than one respect.

However, the boon of a considerably longer term of free school instruction has not yet been so effective as to make comparison of results from both sides absurd, and I imagine that countries having introduced a good *classification* of their pupils owe some of *their success* to that expedient.

Being a warm admirer of the American impulsiveness for progress and advancement, I should feel very glad if this record might prove to be so suggestive that some school tried to apply a more thorough classification of its pupils than is now in use, because I believe it would serve it as a new and efficient lever in the victorious activity for the deaf.

THE EDUCATION OF THE DEAF IN NORWAY.

EYVIND BOYESEN, AGRICULTURAL SCHOOL FOR THE DEAF, SANDEFJORD, NORWAY.

When, as a foreigner, I ascend this platform to deliver my maiden speech, I have to ask you to bear with my English. I should not at all have ventured it if Dr. Crouter, my kind protector during my stay here, had not persuaded me. And Dr. Crouter takes the risk. I have been asked to tell something about the education of the deaf in my country, and I am very happy to have this opportunity to do so. On the whole, I am a very happy man, not only because I have found a work that takes my whole interest and my whole time, but also because I always get it as I want it. Well, then, to the matter.

In Norway we have five schools for the deaf. All are wholly supported by the state. There are two schools for the northern part of the country in Trondhjem and two for the southern part, one in Kristiania and the other at Holmestrand. The children are divided after one year's education into *a* and *b* grades according to their gifts, and are educated in separate schools. Pupils are admitted only to the *a* schools and are there divided and placed in the other schools. If a child neither suits for an *a* school nor for a *b* school it is sent to a *c* school, in the town of Hamar, in the middle of the country. All are oral schools.

The weight of the numbers is at present with the girls. Intellectual branches are taught the deaf from the age of 8 to the age of 16, and some tailoring, sloyd, and shoemaking. They are forced by the law to come to school at this age. After being graduated, the deaf have to make their own living. As it has gradually been more difficult to the deaf to compete with the normal apprentices in different trades, beside these five elementary schools is recently started a little agricultural school near Sandefjord to try if farming would suit the deaf and fully enable them to earn a living if some trade

could be pursued in the winter time. The school is partially supported by the state and partially by the local authorities, who pay for the students. The profit of farming and private means are supposed to cover the rest of the expenses.

As I especially take interest in this agricultural work, which I suppose may interest you, too, I will tell you how I got the idea of starting this school and in what way I did it.

I have been a teacher of the deaf for thirteen years. Only a short time after getting in connection with the deaf I saw how many difficulties these children had to overcome to compete with the hearing apprentices. As teachers usually do, I tried and succeeded in getting work for my graduated pupils in different trades, some as shoemakers, some as tailors, carpenters, printers, photographers, bookbinders, and working jewelers and blacksmiths, and many of them were employed in the factories. When the laborers, however, which often happened, were on strike, the deaf young people came to their teachers and told them they had no more work and some could not explain why. They had not complained of the work and could not at all understand why they were not allowed to work, and what to do?

When bad times went on and the factories had to give notice to some of their laborers, the deaf—who were not first rate laborers—were the first that must go. And in some factories, where the premium of the accident insurance companies has been raised, they don't admit deaf laborers any more, and some who have deaf laborers dismiss them on this account. And what to do? Different trades are by and by gone over to manufactories, so the chances for the deaf to get into trades are decreasing. You see in this way it is very hard for the deaf young men to compete with the hearing apprentices. I therefore found it my duty to help my deaf friends. But how to do it, that was just the question.

For a wonder, the deaf themselves led me to fancy that farming might be something for them. One of my pupils one day was working in the garden, and I asked him: "What are you doing?" And he answered: "I am cultivating the soil." At once it struck me that the work of cultivating—that is just what man is destined for. And I think no work can be more suitable to the deaf. From this day, therefore, I had but one thought: to start an agricultural school for the deaf.

One day I asked my principal what he thought about my scheme, and by and by he agreed to it. And I have been so successful as to have all the authorities upon my side.

In my country all enterprises of that sort have to be started by private means. I therefore made bold to apply to the government for permission for one year to provide means sufficient to buy a property. And within one year I gathered sufficient means. But being a city-bred boy myself, I could not think of going into this work without having any idea of it. Therefore I entered one of our best agricultural schools for one year and learned ploughing, harrowing, sowing, mowing, milking, cleaning the cattle and the horses, and the most important things, and I got a general view of agricultural work. Having finished this school, I bought my farm, wrote to some of my former pupils, and started the school on the 15th of April, 1903, with seven pupils.

My pupils were all very interested in and satisfied with agricultural work. After a course of two years, all of them went through an examination, and all but one, who had an artificial foot, were employed with farmers. The second course is now going on with the same number of pupils, and they are decided farmers. When only so few pupils are admitted, the reason is want of means, which by and by we hope to overcome. Beside farming they are taught some industrial work, as horseshoeing and carpentry, so after leaving the school—whether they get their own farm or not—they can be able to make their own living in the country.

The main point to me is to make the deaf able, and wisely to develop their mind, to make their own living outside the cities—in the country. Nothing seems to me more unnatural than this building of homes one upon another in stories, where you have to pay for every cubic inch of air and for every square inch of floor area.

The air in the factories is bad, and in the homes of the laborers it is not the least better, if it is not worse. In my country, the statistics show that the deaf who, during the last 18 years have died, all died from consumption. I think the statistics here speak an earnest language, and I should be inclined to think that the fact that so many deaf die from consumption may be in accord with the assertion that the deaf who never learned to speak or ceased speaking together with mates are more susceptible to consumption. Only on this account, I think, we must feel ourselves called upon to teach the deaf to speak more and more and to do all we can to keep up the speech.

In all cases, one thing I am sure we can agree on, and that is that we can't do anything better for the deaf than to enable them and persuade them to go to the country, to make them understand that

farming is so far from being an inferior work that it is rather an advanced one. And thus, by keeping the deaf away from the cities and all vanity and excesses there, we should help the deaf to become a stronger and more happy race, and time will show if the number of the deaf shall be increasing or decreasing.

Well, I have tried to make a beginning, and my school is very modest. If you take interest, however, in a thing and you have a good deal of courage, you may reach far. But there is something more important, and which is the only thing I at present want, and that is money. In this immense country, the money is only waiting for the initiative. In my comparatively poor country, the initiative must wait for the money. But I comfort myself in the consciousness that if a matter is good and is started in the right way, it will succeed, if it is true that all good rewards itself.

ALEXANDER MELVILLE BELL.

SARAH FULLER, HORACE MANN SCHOOL, BOSTON, MASS.

Any attempt to portray, in a brief paper, the rich, abounding, literary life and world-wide fame of Prof. Alexander Melville Bell must seem meager and unsatisfactory. He was a great man in the best sense in which that term may be used, for his greatness had its foundation in a profound regard for the sacredness of truth, honor, and justice. Born into a home of refinement and culture, and constantly associated with a father of scholarly tastes, and one whose life was devoted to educational work, he naturally developed the powers that led to distinction in the world of letters. The winning personality, gracious manner, and cordial greeting that awaited every one who sought Prof. Bell's presence were the expression of a sympathetic, generous spirit which gave him immeasurable power over the lives of students. Teaching was his chosen profession, and with what fidelity he met the unceasing demands upon his time, none know better than we, who, for years, have learned wisdom from his lips. For more than half a century, he gave himself unreservedly to the class room and the lecture hall, and yet found time (one wonders how) for the writing of books, filled with the results of his personal, scientific research, careful thought, and painstaking care. As we recall the topics selected for lecture courses, Shakespeare and his plays, Modern British Authors, and many others, delivered on both sides of the Atlantic, as well as scores of

published books, we are reminded of his words in the Centenary Ode, written in honor of Sir Walter Scott,

"Prolific mind! and magic pen!
When shall we see the like again?"

A sentence from the biography, prepared as a gift to the teachers of this Association, in 1892, reveals the "master mind" that had been maturing and strengthening in the quiet seclusion of an environment, conducive to observation and reflection: "In 1842, when twenty-three years of age, he announced to his friends that he had formulated a new theory of articulation and vocal expression. His father, although he did not endorse all the son's conclusions, gave a general approval, summing up his kindly criticisms with the wise and true adage, 'That which is best administered is best.'"

This "new theory" was probably embodied in a treatise on the Art of Reading, published in 1845, which shows a clear insight, even at this early stage in his teaching, into the difficulties attending the acquisition of this art. He says, "The tongue of infancy prattles in imitative exercise, directed by the ear, and strives, with instinctive energy, to give utterance to every sound with which it has learned to associate an idea. It *reads* from the page of memory, the lessons of its little experience, and day by day, enlarges the volume of its language. When to a certain degree familiar with vocal language, its mind is prepared to learn the symbols of written language, to enable it to read by the direction of the eye; and were the order of nature followed at this stage, and only the literal signs of *actual sounds* taught, little difficulty would attend their attainment."

As a remedy for the "errors of our modes of initiation to the mysteries of language," he goes on to say, "The powers of the letters (that is, all the sounds of the language, represented in all the different forms in which they occur) should be made familiar to the *utterance,* before the perplexing names of the letters are taught at all. . . . The qualities that conduce to good reading, are, first, distinctness of utterance; second, discriminating emphasis; next, variety of vocal modulation; and, last, the natural expression of feeling."

Tracing the thought and work of this indefatigable student-teacher through his writings, one finds whole pages which are replete with most valuable suggestions. The following are a few quotations from what he says of speech, elocution, and punctuation. So strongly does the mere writing of them bring back the memory of his tones, they have the force of the living voice:

"Speech, in all the diversities of tongues and dialects, consists of but a small number of articulated elementary sounds. These are produced by the agency of the lungs, the larynx, and the mouth. The lungs supply air to the larynx, which modifies the stream into whisper or voice; and this air, is then molded by the plastic oral organs into syllables, which, singly or in accentual combinations, constitute words. These words are arbitrarily appropriated to the expression of ideas, and thus we have language—variously intelligible in every community, but the same in its elements, throughout the world.

"It is the business of elocution to teach the student three things important to be known: 1st, how to discover all the meanings that any passage may embody; 2d, how to express the several meanings, supposing each of them to be just; and, 3d, how to ascertain the true interpretation, or the sense intended by the author.

"The marks of punctuation are taught in schools as measures of pauses in reading. Children are told to stop at all the 'stops,' and only at the stops, and to proportion their stopping to the supposed time-value of the stops. But the marks of punctuation have no relation to time; nor are they at all intended to regulate the pauses of a reader. They have a purpose, but it is not this. They do, in the majority of cases, occur where pauses should be made, but they do not supply nearly the number of pauses that good reading requires. They simply mark the grammatical construction of a sentence. While word follows word in strict grammatical relation, no comma is inserted, though many pauses may be indispensable; and wherever any break occurs in the grammatical relation of proximate words, there a comma is written, though often a pause would spoil the sense. Commas are placed before and after all interpolations that separate related words—adjective and noun, adverb and adjective, pronoun and verb, verb and object, etc.—but they are not written while words follow each other *in direct and mutual relation.* Punctuation has thus no reference to delivery; it has no claim to regulate reading; and nothing but ignorance of a better guide could have led to the adoption of the grammatical points to direct the voice in pausing."

His words upon stammering and the faults of speech, with directions to parents, nurses, and teachers are priceless. In urging the need of giving "the right direction to the highly impressionable organs of the child," he adds, "This must ever be done in the spirit of kindness; for harshness in correction, scoldings, threats, and punishments, will tend to produce a nervous dread of speech, that may fix itself through life, as a root of bitterness in the soul."

"No part of education is, in general, so lightly esteemed as that of first learning to speak and to read; yet, rightly considered, none is of more consequence. First impressions are the deepest and the

strongest, and the lessons of the Abecedarian are the most abiding. The first governess, tutor, or schoolmaster, should be a model of distinctness in his own practice, and should be, also, intimately acquainted with the physiology of articulation, that he may, both by wise precept and potent example, mold the plastic mouth to grace, and give easy play to the delicate machinery of speech."

In his Standard Elocutionist, Prof. Bell has given An Outline of the Principles of Elocution, the first section of which contains minute, carefully stated directions upon the management of the breath, and the organs of articulation. No detail about which a student would wish to ask seems to have escaped his thoughtful attention. He would have every teacher thoroughly equipped for work, and for this end he labored with rare skill and almost infinite patience. His words in closing an address to the National Association of Elocutionists in 1895, well illustrate this attitude:

"Your department of elocutionary work is—teaching. You have, therefore, to direct all classes of speakers; to lay the foundation, in some cases, and to finish the building, in others. Your professional requirements are, consequently, high and varied. You must have a good ear, a good voice, good articulation, good manner, and good judgment; you must be good phoneticians, good students, good exemplars, and good listeners. And to all these good qualities you must add unwearying patience—to bear with those who are not good at anything."

Indispensable to the student of speech as is all that has been indicated in these allusions to Prof. Bell's work, we are forced to admit that his greatest service was in the invention and formulation of his system of visible speech. The labor of twenty years crystalized in the pages of a book, written with the thought of the needs of all the people of the entire globe! Our wonder and admiration find expression in Hamlet's words: What a piece of work is man; how noble in reason; how infinite in faculties!

THE PROGRESS OF SPEECH WORK IN FOREIGN SCHOOLS.

JOHN HITZ, SUPERINTENDENT OF THE VOLTA BUREAU, WASHINGTON, D. C.

The earliest reliable account we have of speech being taught to the deaf is given us by the venerable historian Bede (673-733), who credits his instructor, Bishop St. John of Hexam and founder of

Beverly Minster, to have taught a deaf and dumb youth "to speak." We read of no further efforts being made to teach speech to the deaf until the fifteenth century, when the learned Dutch professor, Rudolph Agricola of Heidelberg (1443-1485), refers to a case.

In the following century the distinguished Italian philosopher, Jerome Cardano (1501-1576), in a treaties on the subject of deafness, declared in substance that even a congenital mute could learn to read, write, and speak. But it was reserved to his contemporary, the Spanish Benedictine Monk, Padre Ponce de Leon (1526-1584), to give this assertion of Cardano practical illustration by successfully teaching, among others, two *congenitally* deaf brothers of the constable of Castile to speak.

One hundred years later, in the seventeenth century (1620), the first complete treatise on the subject of teaching deaf-mutes to speak appeared at Madrid, Spain, in Juan Bonet's elaborate work, entitled: Reduccion de la letras y arte para ensenas a hablas los mudos (Simplification of letters of the alphabet, and method of teaching deaf-mutes to speak); shortly after (1624) appeared a treatise by the learned Dr. Camerarius, followed in the same century by the analogous treatise in England of John Bulwer (1644), Dr. John Wallis (1653), William Holder, D. D. (1669), and George Delgarno (1680). Contemporaneous, it may be said, yet the result of wholly independent research, appeared (1667) a treatise by F. M. Baron Van Helmont, son of the Belgian scientist, Johan Baptiste Van Helmont, and in 1692 the original Latin edition of "Surdus Loquens" (the speaking deaf), amplified eight years later (1700) into "Dissertatio de Loquella" (Dissertation on Speech) by the gifted young Swiss physician, Johann Conrad Ammann, M. D. (1669-1724), resident of Holland, who had successfully taught speech to five different deaf pupils, and whom Dr. Edward Walther,[1] the distinguished director of the Berlin Imperial Institution, designates the real founder of what is known as the "German Method." In an earlier work[2] Walther says: "Ammann's labors were of a far-reaching effect in evolving primarily the German method of instruction. He not only thoroughly and convincingly showed the manner and possibility of instructing the deaf, but himself for ten years gave practical illustration thereof. His writings clearly showed how to proceed, and hence in them are to be sought the initials of the German Method, having, as he declared to Wallis, exclusively applied his researches to the letters of the German language."

[1] Th. Walther, Taubstummenbildung, Berlin, 1895, p. 157.
[2] Geschichte des Taubstummenbildungswesen, 1888, pp. 35-36.

Heinicke and subsequent German teachers had, therefore, only to follow Ammann, whose writings Walther further says "not only are a guide how to teach speech, but also comprise a theoretical explication of the physiology of speech sounds, evince keen reasoning in regard to the gradual development of human speech generally, display a most happy gift of observation and, in fact, a thorough comprehension of the subject, comprising as they do:

"1. The origin of speech; organs of speech in general; of voice, and toneless breath.

"2. Sounds and the various modes of producing them.

"3. Art and manner, how the deaf are to be instructed, and defects of speech corrected."

Ability to teach the deaf to speak, including lip or facial speech-reading, up to this period had been exemplified individually and in private schools in numerous instances, among others in England by Drs. Wallis and Holder, Henry Baker, and the Braidwoods, and on the Continent, among others, notably by the learned investigator, Lana Terzi, Drs. Kerger and Raphel, Director Lasius, and the Rector Arnoldi; in France, specially, by Pereira, Enaud, Deschamps, the revered Abbe de l'Epee,[1] and in Italy by the Abbe Silvestri.

To the resolute German, Samuel Heinicke (1729-1790), however, must be accorded the credit of having established and with nine pupils, April 14, 1778, opened in Leipzig the FIRST PUBLIC INSTITUTION DEVOTED EXCLUSIVELY TO THE TEACHING OF SPEECH TO THE DEAF. His fearless and indomitable will ensured his success. He had no new method to devise, but simply firmly adhered to what his predecessors had individually tried and found effective. Just what constituted his method he never fully divulged, but it can safely be inferred that in principle it was identically that of Ammann's, and yet had it not been for his undaunted spirit and fearless insistence of teaching speech, and educating strictly by speech, the so-called German, or "Lautsprach" (oral), method would not have survived in its purity the onslaught of certain influential contemporaries and succeeding antagonizing colleagues engaged in teaching the deaf. Nevertheless, neither to Heinicke nor to Ammann can be accorded the credit of having achieved the prevailing most approved course of speech-teaching and development of thought in language. "This is due," says H. F. Tietjen, the learned German writer on speech-teaching, "to the enlightened, self-sacrificing earnest labor of painstaking teachers of the deaf."

[1] See letters of Abbe de l'Epee, 1776, N. E. Palladium, July 26, 1803, and ASSOCIATION REVIEW February, 1900.

To what extent the German, or "Lautsprach," method of teaching speech maintained itself, and progressed numerically during the first century of its existence in certain foreign schools, may be seen from the accompanying condensed statistice of Dutch, German, and Italian speaking schools, contained in "Tabular Statement of the Institutions of the Deaf and Dumb of the World," which appeared in the January (1882) number of the American Annals of the Deaf and Dumb. The concluding summary gives the estimated speech-teaching in virtually all foreign schools at the commencement of the present century.

Condensed Tabular Statement of German, Dutch, and Italian Speaking Institutions.

Countries	Date of Census	Pupils	Method	Combined
Austria-Hungary	1878	1,092	Oral.	
Germany	1881	5,608	"	
Italy	1880	1,451	"	40
Holland	1880	465	"	
Switzerland	1878	380	"	
		8,996		40

Estimated Speech-teaching in Schools for the Deaf, exclusive of North and South America, compiled from Reports made to the Volta Bureau, January 1, 1901.

Continents	Countries	Total Number of Pupils	Number Taught Speech.
Africa		127	70
Asia		453	300
Australia		332	250
Europe	Austria-Hungary	2,339	2,100
	Belgium	1,265	1,200
	Denmark	348	278
	France	4,098	3,898
	Germany	6,497	6,497
	Great Britain	4,222	3,115
	Italy	2,519	2,196
	Luxemburg	22	22
	Netherlands	473	473
	Norway	309	309
	Portugal	64	54
	Roumania	46	30
	Russia and Finland	1,719	1,555
	Servia	26	26
	Spain	462	265
	Sweden	726	720
	Switzerland	650	650
		26,697	24,008

No one has bestowed more impartial and greater praise upon the "German" method than your colleague, the highly revered, late headmaster, Dr. David Buxton, F. R. S. L., who on the subject of consistency in methods thus expressed himself in a paper written for the International Congress at Milan, September, 1880:

"The man who can plume himself upon his consistency (if nothing more) is he who learns nothing, but remains fixed and immovable from first to last. Those, on the contrary, who are ever learning, and constantly applying their additional acquirements to practical ends, are often open to the cheap and ready charge of inconsistency; but they have their compensation, for it is to such as they that the human race has often owed its greatest obligations.

"Besides, there are those present who can testify that I never was the direct opponent of the 'German' system. I always said that speech for the deaf was the best thing conceivable. Placed, however, as I was, I had to work for the best thing attainable, yet never shutting my eyes to the superior end, and only waiting for the proof that it was possible. That proof I have received. I have seen the possible accomplished. The ideal of my conceptions and my hopes is realized in successful German teaching, and in that alone. I see that the deaf, taught upon any other system, are BOTH deaf and dumb; taught upon this sysem they are not 'deaf *and* dumb.' And you who hear these words know better than any one else the infinite world of difference which is involved in this distinction."

It would seem that the teachers of the deaf in foreign schools employing the "German method" have wisely not contented themselves only in consistently adhering to what their predecessors achieved, but have earnestly striven to improve and to ensure the highest possible standard of their work. Whether the lines upon which they have been working will in the present century of active thought, keen research, and independent venture prove to be the most effective in achieving the goal of perfection aimed for, remains to be seen.

A feature of the German method adhered to from the time of Heinicke to the present in foreign speech-teaching schools is to discourage, and in fact suppress, speech-teaching to very young deaf children during the early and most impressible period when their hearing associates are acquiring speech naturally and rationally exercising the speech mechanism of their voices. Kindergartens, where deaf children are admitted to classes as young as they are in several American schools, and learning there to lip-read and prop-

erly use their vocal mechanism, are virtually unknown and disapproved of by the leading foreign pedagogical authorities engaged in the instruction of the deaf.[1] This feature of foreign speech-teaching schools continues to be adhered to also by many American principals of schools, despite the fact that some of their more progressively inclined colleagues are lowering the age of admission, claiming that they realize the younger a deaf child can *intelligently* be guided and trained in the formative period of a normal child's speech the more readily it will acquire skill in lip-reading and learn to speak its vernacular in a natural manner.

At one of your earliest meetings, already,[2] a thoughtful and earnest teacher thus forcibly spoke in behalf of little deaf children:

"We believe a new world lies before the deaf child. Language is to be developed naturally. . . . What is the natural way? Does not every mother-heart know? Does not every one who has felt the beauty of child-life know? Can we wait until *school age?* For what was this sweet, eager, impressionable time of infancy and youngest childhood given? Is it not specially for the general development of body, mind, and heart? Is it not especially for the development of speech? *Ought we to wait?* How can we allow these little spirits to be imprisoned by our neglect of human nature's most natural time for *spontaneous speech?* Are we not overlooking one of God's best opportunities?"

It would seem that American teachers of speech have herein supported by parental approval, and that of acknowledged pedagogical and medical authorities,[3] made a notable divergence from the practice of their colleagues abroad, which, if its success thus far proves an established fact, in time must materially affect the generally existing present practice of foreign speech-teaching schools.

Another and a serious difficulty encountered in foreign speech-teaching schools, it would seem, is the lack of some uniform scientific standard for alphabetic sounds. The German method, as originally taught by Ammann, had as its basis the generally then accepted sounds of the letters of the German alphabet, and these were ap-

[1] The nearest approach of record to such training in Germany is the sub-primary school at Plauen, connected with the main institution in Dresden, where "pupils are admitted at the age of *six* years." During the first year they learn lip-reading, reading, and writing; are, however, not taught speech, but proper exercise in breathing, correct observation, and the use of their hands. Articulation is added in the second year.

[2] Report of Third Convention of Articulation Teachers of the Deaf, p. 153.

[3] See testimony of State University authorities and others, session of Pennsylvania Legislature, 1891.

proximately indicated by diacritical marks devised by lexicographers. Other nationalities who adopted the German method of speech-teaching naturally, also, employed differentiating marks for the sounds their alphabets called for, and as the deaf of the world who are being taught speech belong to some twenty nationalities, the speech of each nationality demanded as many differentiating marks of their respective alphabetic speech tones. Not only this, the teachers of widely separated sections, speaking the same language, but addicted to their several dialectic idioms, when locally trained, vary in what they severally consider the correct pronunciation of the letters of their common language, and this is applicable to all languages, including the English, which is used by some 2,000 teachers in the instruction (according to the latest available statistics) of 17,000 deaf pupils, or nearly one-half of the entire number (38,819), taught in the whole world.

Here, again, the more enlightened of American teachers of speech and principals of schools would seem to have ceased following the German method as practiced abroad by discarding their lexicographers' diacritic designation of alphabetic sounds and adhering strictly to Prof. A. M. Bell's system of scientifically determined and uniformly fixed standard of alphabetic sounds, not only for the English alphabet, but for the alphabets of all languages.

I am aware that in England, teachers esteemed in their profession, after having given Prof. A. M. Bell's system a trial, have spoken disparagingly of it, and a teacher in America who prided himself as an exponent of the German method in one of your earlier meetings, argued against its applicability and efficiency; in both cases, ascribable to the deplorable fact that neither, like others, had attained sufficient skill and scientific knowledge of Vocal Physiology to master the subject fully. On the other hand, the principal of a model speech-teaching school, in a public address,[1] states emphatically: "Perhaps no single influence has done so much for the improvement of articulation work in America as the introduction of Prof. A. M. Bell's system," and the late Dr. J. C. Gordon, familiar with the German method, and an acknowledged authority on speech-teaching, on another occasion, stated: "All teachers of articulation should be thoroughly grounded in the mechanism of speech, and to this end Prof. A. M. Bell's system gives a completeness, definiteness, and sense of mastery not readily acquired by any purely *experimental* system."[2] Add to this the following testimony of the eminent pho-

[1] Proceedings of the First Summer Meeting of the A. A. P. T. S. D., p. 181.
[2] Facts and Opinions, p. 9.

netician, Dr. Alexander John Ellis, who unequivocally stated: "As I write I have full and distinct recollection of the labors of Ammann, Du Kempelen, Johannes Müller, K. M. Rapp, C. R. Lepsius, E. Brücke, S. S. Haldeman, and Max Müller. . . . I feel called upon to declare that until Mr. Melville Bell unfolded to me his careful, elaborate, yet simple and complete system, I had no knowledge of alphabetics as a science, . . . and I have looked for it far and wide; it did not exist." And, finally, of the innumerable tributes paid the author upon the result of this system as exemplified in his own person as a teacher, even to extreme old age, I would add that of a distinguished contemporary,[1] who says: "I was much struck with the purity and charm of his speech. It was a revelation to me. His utterance seemed to combine the easy, graceful intonation of the talk of a cultured actress, with the strength and resonance that should characterize the speech of a man, and though finely modulated it was without suggestion of affectation, either as to matter or manner. I had never before, and I do not know that I have since, heard English spoken with the care and *delicate precision* that so distinctly marked the speech of Mr. Bell. *His clean-cut articulation,* his *flexibility of voice,* and *finely modulated* utterance of *English* was an exemplification of what *efficient* and long continued *training* of the vocal organs will do for human speech and how charming the result!"

Upon such authority and with such a model result of speech work *in living form* before them, it is not to be wondered that rather than blindly follow their foreign colleagues the more earnest American teachers of speech will adhere and seek to further perfect themselves in a system, the result of which, when thoroughly mastered, promises success to a degree heretofore unattained. This evident rivally between the *speech work* of foreign and American schools along somewhat different lines cannot but eventually prove mutually advantageous in its final result to the deaf. This does not imply that the science of acquiring speech should be directly taught to the deaf pupil, and results such as the above be expected of him; but it shows that intelligent teachers who make the Bell system the basis of all their work in phonetics, if they fully master it, are assured of success in their labors with pupils to the fullest extent possible thus far devised by science.

In conclusion, I would invite your attention to a pamphlet I have provided for distribution, which gives the law and recites the

[1] See Life and Labors of Sir Isaac Pitman, as told by Ben Pitman, p. 184.

particulars leading to the recent far-reaching enactment of the French government, in a measure completely incorporating instruction of the deaf in the public school system of France—a movement which must eventually result in greater uniformity of method and promote speech work throughout the land.

ANNUAL BUSINESS MEETING OF THE ASSOCIATION—ADJOURNED SESSION.[1]

The Annual Business Meeting of the Association was called to order at 11 a. m. Friday, August 31, Dr. Crouter in the chair. The call for the Seventh Summer Meeting of the Association was read by the Secretary, and the President read the following minutes of the meeting held July 3 in conformity with that call:

Minutes of the Seventh Summer Meeting.

Pursuant to the call issued by the President and Secretary through the Association Review in April last, the Seventh Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf held its Annual Business Meeting in the office of the Western Pennsylvania Institution for the Instruction of the Deaf and Dumb, Wednesday, July 3, 1906.

The call for the meeting was read by Dr. Burt before the members of the Association assembled. In the absence of both the President and the Secretary, Dr. W. N. Burt was elected President *pro tem.* and Miss Candace A. Yendes Secretary *pro tem.*

On motion of Miss Van Benscoten, duly seconded, it was unanimously resolved to adjourn the Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf to the afternoon of Saturday, August 25, 1906, the meeting to continue its sessions until noon of Friday, the 31st, and the Annual Business Meeting for the election of Directors of the Association was adjourned to the last day of the postponed Summer Meeting, Friday, August 31.

On motion, the Seventh Summer Meeting of the American Association to Promote the Teaching of Speech to the Deaf was adjourned in accordance with the above resolution.

W. N. Burt,
President.

Candace A. Yendes,
Secretary.

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[1] Adjourned from July 3, 1906.

A motion that these minutes be approved and spread upon the record with the minutes of the adjourned meeting was formally presented and adopted.

On motion, formally presented and carried, the reading of the minutes of the last Annual Meeting held in 1905 was omitted, as the proceedings were fully published in the ASSOCIATION REVIEW at that time.

The first business of the Association was the election of persons in nomination to succeed the five Directors, Dr. Alexander Graham Bell, Mrs. Gardiner G. Hubbard, Dr. A. L. E. Crouter, Miss Mary McCowen, and Mr. J. W. Blattner, whose term of office expires at the close of this meeting. The above named five persons having been placed in nomination in a manner to meet the requirements of the Constitution, and no others having been nominated, by resolution, formally presented and adopted, the Secretary was directed to cast a single ballot for them. The ballot being cast, it was announced that Dr. Alexander Graham Bell, Mrs. Gardiner G. Hubbard, Dr. A. L. E. Crouter, Miss Mary McCowen, and Mr. J. W. Blattner were elected to succeed themselves as Directors for the term of three years from the close of this meeting to the close of the Annual Meeting for 1909.

Mr. Booth read the Treasurer's report of the last fiscal year, which, upon motion, was received and ordered placed upon the minutes.

President Crouter then made announcement of the public meeting of the Pittsburg branch of the "Pennsylvania Society for the Advancement of the Deaf," to meet in the room in which the Association had held its meetings, at 8 o'clock on this Friday evening. All members of the Association were invited to be present.

MR. JOHNSON: I think there is a matter that this convention should consider and act upon today, either by the passage of its own resolution here, or by indicating that the Board should take the matter up, and that is a question concerning the pensioning of old teachers of the deaf. As we all well know, the teachers in our work are not well paid. In some cases they are not so well paid now as they have been in the past, and I must confess, so far as I am concerned, and so far as I can see in the future, there is not very much hope of greatly enlarged pay. The air of mystery and secrecy surrounding the education of the deaf is, as we all wish it to be, rapidly disappearing, as it should; and I can see no reason why we should consider the deaf child different from the hearing-speaking child. That

being the case, we are approximating more and more every day the work as laid down for the hearing-speaking child; we are being guided by the same pedagogical principles that are guiding all teachers in the ordinary work with the normal child. Under such conditions our salaries are going to be on a level with the salaries paid public school teachers, and until the movement to raise these salaries becomes general, as it is now working all over this country through the efforts of Boards of School Commissioners and through that of the teachers themselves, I fear that we shall have to stay down where they are; they will become our standard for the paying of salaries, notwithstanding our belief that teachers of the deaf should know all that public school teachers do, and more, too. But I am glad to say that at the National Educational Association meetings, both at the general meeting in the summer and at the meeting of the department of superintendence in the winter, this question is one that is always up for discussion favorable to the teacher; and I have no doubt that in the near future there will be an advance in the salaries of the public school teachers, and that we will go along with them. In this matter I am referring especially to our state schools for the deaf, which draw their sustenance from the same source as do the public schools—that is, from the taxpayer and through appropriations; and the appropriating body seldom possesses nicety of discrimination as to mental values and varying phases of the work—we have to deal with conditions, not theories.

From time to time, however, effort is being made by certain societies or certain people who have the wherewithal to do it to provide for the pensioning of old teachers in colleges; I refer especially to the Carnegie Foundation Fund. Under the present rules, which those in charge thereof have adopted as a beginning, they have tentatively agreed upon certain restrictions and limitations. They have specified in these rules that certain undenominational institutions of learning only shall be classed as colleges according to their definitions; that they must have at least a certain number of professors and a college course of four years, with four years leading up to the freshman year. That, of course, shuts out most of the smaller schools and smaller colleges over the land. They go a little further, however, and make some qualifications; they say they realize that smaller schools that are shut out under their definition of a college contain a number of worthy teachers who have taught for long years with honor and credit, and who are equally deserving with those who stand in the higher schools, and that some time in the

future they hope to widen out so that they can take these in. They also realize that here and there, dotted over the land in other schools that cannot be called colleges at all, are worthy people who have devoted a lifetime of sacrifice to the cause of education (that is what it is; the life of any teacher, I think, is a sacrifice, yet a glorious one, but a glorious sacrifice does not always buy bread and butter); they realize that scattered here and there are worthy cases that should by all means be recognized and aided by the Carnegie Foundation Fund, and these cases, they say, will be taken up individually here and there. Now, I feel that this convention today, as I stated a moment ago, either by direct resolution itself or by direction of some kind to the Board of Directors, should make known and indicate that we desire to have the Carnegie rules so extended that worthy cases in our own profession may be included in the distribution of honorariums. These honorariums do not partake of the nature of charity, but come as honorable pensions for a long life well spent at inadequate compensation for the advancement of youth, and for that reason I think that everybody would be glad and proud to accept a thing of that kind. Looking over the profession, I know we have both men and women who have taught ten, twenty, thirty, and forty years. One that I know in particular has taught fifty-four years, and he is still teaching, and a good teacher, too, at that. So I would suggest that a committee be appointed to take this matter up, formulate some line of procedure, and communicate with the proper parties to see if some good results will not come from the efforts of this committee. I will move that a committee of three be appointed for the purpose of considering the matter of obtaining recognition for this profession from the Carnegie Foundation Fund, and that this committee of three be appointed by the chair with authority to act, and to report back to this convention at some future date, through the President, or probably through our magazine, the ASSOCIATION REVIEW.

The foregoing motion was seconded, and carried unanimously, and the following committee was appointed by President Crouter: Richard A. Johnson, Dr. Alexander Graham Bell, and Edmund Lyon. Dr. A. L. E. Crouter was added to this committee by action of the convention.

MR. JOHNSON: If you will allow me to talk just a little more, I wish to say that I have been requested by the President of this Association to say something concerning the education of the deaf in China—in other words, of Mrs. Mills' school for the deaf at

Chefu. At the meeting of the Board of Directors in Washington, in January last, this question was taken up, and it was resolved that this Association should stand as sponsor for Mrs. Mills' efforts in China. You are all perfectly familiar with her work there—the hardships which she has for so long endured and must continue to endure, and the means that she has to have from this country to carry on her school. Of course, she gathers some of her means from England, and probably from other places, but the bulk of it, as I understand, comes from this country. In pursuance of that resolution, an appeal was made to all liberal-minded and charitably-disposed people to contribute as far as they may be able to the support and maintenance of this school in China. It does not require very much—a very little of our money put into the Mexican silver values would educate a child there; and in the resolution such an appeal was made. This resolution was published in the REVIEW, and I simply call attention to it this morning to renew your interest in the matter. I think that is the reason I have been requested to speak of it, so that we may carry back to our own schools the knowledge of what has been done. And if there is any opportunity in the schools at all, either through the Christian Endeavor Societies or other means, to gather up these contributions, I think that should be done, and the money sent to Mr. Booth, the Treasurer of the Association. I believe it would be a great deal better for our Christian Endeavor Societies and Sabbath Schools to collect this money and send it to Mrs. Mills than to send it out to the General Mission Movement. This is a mission of our own. The churches and others can take care of the rest of the dark places of the country, but let us take care of this work for and with the deaf, so far as we are able to do it; and when we come to consider that in China there are over four hundred thousand deaf people, the majority of whom are children, waiting to be educated, and only ten or fifteen of them being educated, we can see the necessity for some such action. After the passage of this resolution, and after my return home, I took this matter up. How far it has reached, I cannot say at this time. His Imperial Highness, Prince Pu Lun, of China, the gentleman who was in this country two years ago, spent over a week at Indianapolis during the World's Fair, and became greatly interested in this work. As a member of the executive committee for his entertainment it fell to me to conduct the Prince and his retinue through our State Institutions. Young and active, bright and quick in thought, well educated and a clever gentleman, he showed immense interest

in all he saw. He never had seen a school for the deaf before in his life. The first place he visited was the Indianapolis Institution, where he spent two hours. We had a map on the platform; we called up three or four bright, pretty girls of an oral class, and they took the pointer and showed him the outlines of his country, and described it and told of its history, etc. Of course it was interpreted to him through Mr. Wong, who was with him, and his interest was aroused. Mr. Wong told me afterwards that Prince Pu Lun had no idea that the deaf child could be educated or made use of in any manner whatsoever, and that upon his return to his own country he would no doubt search out that little school at Chefu and see what could be done for it. It was to remind him of his promise made at that time that I have opened correspondence with him. Mr. Wong, I regret to say, in the meanwhile has died—a very liberal-minded and highly-educated man, a cultured gentleman—and I think we lost a great friend for Mrs. Mills in him. Prince Pu Lun, I want to say also, it was reported to me, is probably in direct line for the present Emperor's throne. I hope that it is so. He is a nephew, and a favored one.

At the January meeting we also took up the question of the education of the deaf in Cuba, and we felt in this meeting that the American Association was the proper body to spread its arms out, not only over the United States, but over other countries—over all the world, if we could reach it; we wanted to be a power if we could, and I know of no better place for all these thoughts concerning the welfare of the deaf to be planted and have them germinate and spring into life than through this Association. As President of the Conference of Superintendents and Principals, I have taken this matter up with President Palma, in Cuba. This matter was thoroughly discussed by Dr. Bell and others, and Dr. Crouter was directed to take the matter up again as the head of this Association, and he may probably be able to tell you what he has done along that line. So far as anything successful having been done in Cuba I do not know, but that an effort is being made to establish schools I do know for a fact, and I only hope that something will result from our efforts.

In conclusion, referring to the Carnegie Foundation Fund and to affairs in China and Cuba, I am a believer in this—that we never get anything by sitting down and wishing for it. The only way to do a thing is to get up and go after it, beg for it and fight for it, and do anything we can to get it; in other words, "Be up and doing." That is the reason I bring these matters up this morning.

DR. WESTERVELT: The children at all our schools throughout the country have contributed to Mrs. Mills' work, and to such of them as were able to meet her during her recent visit to America it was an especial pleasure to have Mrs. Mills tell them what her little Chinese deaf boys have accomplished and thank them for their aid. In order to enable our mission society to increase the amount it sends, the Rochester school provides pupils who wish to take them with subscription books, and gives them written authority to act, while at home, as collectors for the work. It provides them also with a number of little pamphlets, telling the story of the mission, which they give to subscribers. In this way our missionary workers do as Mr. Johnson advises, "Get up and go after" money for Mrs. Mills—"work for it and beg for it."

DR. CROUTER: I would like to state that I addressed a communication to President Palma, of the Cuban Republic, in regard to the establishment of schools for the deaf in that country, a very short time after the meeting of our Board of Trustees in Washington, last January, and that I received a letter in response from President Palma stating that he felt greatly interested in the matter, and that as soon as the resources of the government of Cuba warranted it, steps would be taken to establish schools for the instruction of deaf children; but at the time he wrote he did not feel that any active steps could be taken very soon. The matter is in his hands.

MR. LYON: I am sure we cannot fail to be impressed with the magnitude of the opportunities which this question opens, also the urgency of Mrs. Mills' needs, and, furthermore, the importance of having the first school established along lines which we would like to have followed throughout the Empire. You know how easy it is for us to follow the example which is nearest to us and to be influenced by the results which are at hand, and if we can in some way furnish Mrs. Mills with ample funds to carry on her work along the lines with which we particularly sympathize, we can make it possible for her to achieve success along those lines, then undoubtedly they will be followed in the future. Whatever she establishes in the first school will undoubtedly have a very great influence upon the institution of other schools, hence it is a very important matter for us to consider. I do not think that we can do anything as an Association, but I think perhaps a resolution might be passed to the effect that as individual members of this Association we sympathize most heartily in Mrs. Mills' efforts, and that we will do what we can to help along her work. I therefore offer the following resolution:

WHEREAS, Mrs. Annetta T. Mills, the founder and principal of the first school for the deaf in China, who is now closing her sixteenth year's work, now finds herself beset with many perplexing difficulties, among which is the obtaining of sufficient financial support to enable the school to open its doors to female pupils; and,

WHEREAS, The work Mrs. Mills is doing is along lines which meet our cordial commendation and sympathy; therefore, be it

Resolved, That we, the members of the American Association to Promote the Teaching of Speech to the Deaf, in Summer Meeting assembled, send our warmest salutations to Mrs. Mills across the great waters, and with them earnest hopes for the increasing success of her self-sacrificing effort; and, furthermore, we pledge ourselves personally to put these hopes in a form to assist her materially in her pioneer work among the deaf of China.

The foregoing resolution, being duly seconded, was carried unanimously.

MR. LYON: I trust, Mr. Chairman, that you will reconsider your determination to put a lid upon this conference. Many are here, I am sure, that have not yet had an opportunity to speak to us. Of course, we who have spoken will not be expected to say anything more, but there are some that we should be very glad to hear from, and I have in mind one especially, the first letter of whose name is Harriet B. Rogers. A little later, after she has had a chance to collect her thoughts, I trust you will grant us the privilege of listening to her.

DR. CROUTER: I am sure we should be very greatly pleased to hear from Miss Rogers at the present time.

MISS HARRIET B. ROGERS: When our president spoke this morning he recalled the time of the first meeting of this Association and referred to those then in the work who have since passed on. My thoughts went back to earlier days, and of the principals I knew then I think but two survive. Some of them upheld *our* hands in those early days. There were other noble workers whose going out of life meant a loss to our cause. But it is a great pleasure to see so many young men and women coming on to take their places and entering into the work with such enthusiasm. It is hardly possible for you to understand the delight—that word expresses it better than any other—that I have had in watching the deep interest you have shown in these meetings. Such interest can hardly fail to produce better results than you have yet reached. I also rejoice in the harmony that has prevailed. I have heard no dissenting voice. I was pleased with the resolution that Mr. Walker offered with regard to the necessity for teachers becoming familiar with Visible Speech. If I could have

had the knowledge of that when I began the work I could have taught far better than I did. I did not have it and had to feel my way. Such ignorance as mine was I would not accept in a teacher in these days. I think it would be wrong—yes, a sin—for any of you to begin the work of teaching deaf children to speak when you were as ignorant as I was when I began; but there was no help for it then, none that I knew. I hope you will appreciate the advantages you have and will do all you possibly can to gain skill in your work, especially by becoming very familiar with visible speech. I shall be glad, if it is ever my privilege, to meet you again; and wherever we may meet I hope you will speak with me. I shall always be glad to welcome any one who is in this work.

MR. LYON: At this juncture I beg to offer in the form of preamble and resolution the following tribute to the memory of our revered friend and co-laborer, Prof. Alexander Melville Bell:

WHEREAS, In the fulness of a rich old age, with the vigor of mind and body, which had marked a long and active life, unimpaired, while enjoying the fruition of his splendid discoveries in the realm of phonetics, which directly and indirectly have been so great a boon to the deaf and to their instructors, and while still intent on labors for the benefit of mankind, Professor Alexander Melville Bell exchanged the activities of this life for those of a higher; and

WHEREAS, It seems appropriate at this time to give expression to the deep sorrow we feel, both as an Association and as individuals, at the loss of so strong and wise a counsellor and friend; therefore, be it

Resolved, That we, the members of the American Association to Promote the Teaching of Speech to the Deaf, formally record our heartfelt gratitude for and appreciation of all Professor Alexander Melville Bell has done to lighten the difficult task of teaching speech to the deaf, and pledge ourselves to show this affectionate appreciation of Professor Bell's magnificent work and manhood by bringing a knowledge of Visible Speech and its basic principles home to every teacher of the deaf, believing that in this way, and in this way alone, can we approach the fitting commemoration of so noble a personality and so large a service.

Adopted by a rising vote.

The Committee on Resolutions presented the following:

Resolved, That the American Associate to Promote the Teaching of Speech to the Deaf tenders a hearty vote of thanks to the Hon. John B. Jackson, President; to the Honorable Board of Trustees; to Superintendent William N. Burt, and to his excellent wife; and to the teachers and officers of the Western Pennsylvania Institution for the Deaf and all others associated with them, for the gra-

cious hospitality, excellent entertainment, and uniform courtesy accorded to the members of the Association.

The foregoing resolution being seconded and carried, Dr. Burt was called upon to speak.

DR. BURT: Ladies and gentlemen, if you have enjoyed the convention as much as I have, I am perfectly satisfied. I hope that when you leave the Institution tomorrow you will carry with you very pleasant memories of your visit. Many of you have spoken in kindly terms of the arrangements that were made for your comfort and entertainment. I wish to say that if any success has been achieved it is due to the very hearty coöperation of our officers and teachers. They have cheerfullv responded to all calls made upon them, no matter how unreasonable they might seem. Our Board of Directors have stood behind me through all of our preparations, telling me to act as I thought best, and to call on them at any time if I needed assistance.

For the past year we have all looked forward to the assembling of this convention, anticipating a great deal of pleasure and profit from its sessions. I can assure you that the pleasure derived has exceeded the expectation of the most sanguine. The Seventh Summer Meeting of the Association will ever be a bright spot in the history of our Institution. Allow me, in behalf of our entire body of officers and teachers, to thank you most sincerely for the "sweet reasonableness" that you have one and all shown, and to congratulate you on the hearty manner in which you have helped to entertain yourselves.

The Committee on Resolutions reported the following additional resolutions:

Resolved, That the thanks of this Association are hereby extended to Dr. Samuel Hamilton, Superintendent of the Allegheny schools; Dr. Samuel C. Schmucker, of the West Chester Normal School; Dr. Samuel B. McCormick, Chancellor of the Western University of Pennsylvania; Dr. G. E. Curry, Pittsburg; Mr. Edwin Stanley Thompson, Mt. Airy, Philadelphia; Dr. Adolph Koenig, Pittsburg; Dr. Chevalier Jackson, Pittsburg; Dr. Samuel Harden Church, Pittsburg, and Hon. John Hitz, Superintendent of the Volta Bureau, Washington, D. C., for the scholarly, instructive, and entertaining lectures they delivered before the members of this Association.

Resolved, That the Association expresses its deep regret at the unavoidable absence of Dr. Alexander Graham Bell, its founder and generous patron.

Resolved, That the thanks of the Association are hereby extended: First, to Dr. A. L. E. Crouter for his thoughtful and inspiring address, and for his dignity, courtesy, and impartiality as President. Second, to the Secretary, Dr. Z. F. Westervelt, General Secretary, Mr. F. W. Booth, and Assistant Secretary, Dr. A. C. Gaw, for their efficiency and courtesy as officers. Third, to the stenographer, Mr. L. W. Mendenhall, for his very efficient service and kindly bearing during the meeting of the convention.

Resolved, That the Association hereby extends thanks to Superintendent J. W. Jones and Miss Ada Lyon, of the Ohio Institution for the Deaf and Dumb, for their exposition of the work with Leslie Oren, and we recommend that they be invited to appear at all Summer Meetings of the Association until Leslie shall have completed his course of study at the Ohio Institution, so that members of this body may have the opportunity of watching his development.

Resolved, That the Association hereby expresses grateful appreciation to Miss Caroline A. Yale, Principal of the Clarke School, Northampton, Massachusetts, for her helpful course of lectures on "Visible Speech."

Resolved, That the thanks of the Association are hereby extended to Mr. A. N. Downing, Miss Alice M. White, and Miss Ella J. Dimmick and their pupils for their excellent exhibition of the school-room work of the Western Pennsylvania Institution for the Deaf and Dumb.

Resolved, That the thanks of the Association are hereby extended to Superintendent Charles P. Gillett, Miss Eliza Kent, and Miss Edith Wyckoff, and the pupils of the Illinois Institution for the Education of the Deaf and Dumb, for the excellent exhibition of their work in Arithmetic.

Resolved, That the hearty thanks of the Association be and are hereby tendered to the daily papers and their representatives for the courtesy they have shown toward the meeting, and for the full and accurate accounts of the proceedings which have been published.

WHEREAS, From year to year an increasing number of teachers of the deaf are endeavoring to fit themselves for more efficient oral work; therefore, be it

Resolved, That the Board of Directors of this Association are hereby requested to do all in their power to arrange for a Summer School for instruction in speech-teaching whenever the number of teachers desiring such instruction shall justify such arrangements.

WHEREAS, The American Association to Promote the Teaching of Speech to the Deaf, having recently been made the recipient, at the hands of its founder and constant benefactor, Alexander Graham Bell, of a gift of seventy-five thousand dollars for the purpose of establishing the "Alexander Melville Bell Memorial" in honor of his beloved father, whose life-work was the advancement of correct speech; therefore, be it

Resolved, That the Association, in Annual Meeting assembled, hereby expresses its grateful thanks for the gift, as well as its appreciation of the filial and loving spirit that prompted it; and be it further

Resolved, That it is the sense and desire of this Meeting that the fund created by the gift shall be employed at the discretion of the Board along the lines suggested by its donor, thus, "largely in the work of training teachers, which training shall include the giving of a thorough knowledge of the system of Visible Speech," which knowledge we hold to be, in its fundamental nature and comprehensiveness, essential to teachers of the deaf, for mastery by them, in any degree complete and thorough, of the science and the art of articulation teaching.

Resolved, That the thanks of the Association be extended to Mr. A. L. Branson for the attractive manner in which the daily programs and other printed matter used in the meeting of the Association were prepared, and the promptness with which they were delivered.

Resolved, That the thanks of the Association are hereby tendered to Dr. Alexander Graham Bell for his gift to it of the edition of the volume of his lectures just published on "The Mechanism of Speech"; and that, in this expression of our thanks, we also express our appreciation of the great value of this publication to teachers as a text-book for study and use in the development of philosophical and practical methods of teaching speech to the deaf.

MR. JOHNSON: I think we ought to add a resolution here for the gentlemen and ladies who have piloted these various visitors. It has contributed in a material way to our welfare. These ladies and teachers and others—I do not know whether they are all teachers or not—have kindly taken us everywhere, and without their assistance we would not have had one-hundredth as good a time as we have had; and I would offer that as a resolution, that they be thanked cordially for their attentions.

The foregoing resolution, being duly seconded, was carried.

After the singing of "America" the Seventh Summer Meeting was closed with prayer by Dr. G. O. Fay, of Hartford, and adjourned *sine die.*

Z. F. WESTERVELT,
Secretary.

EDITORIAL COMMENT.

THE ANNUAL MEETING OF THE BOARD OF DIRECTORS OF THE ASSOCIATION.

The annual meeting of the Board of Directors of the American Association to Promote the Teaching of Speech to the Deaf was held at the Volta Bureau, Washington, D. C., February 1 and 2, 1907.

There were present the following named directors: A. L. E. Crouter, president; Alexander Graham Bell, first vice-president; Caroline A. Yale, second vice-president; Z. F. Westervelt, secretary; Mrs. Gardiner G. Hubbard, Mary McCowen, Edmund Lyon, E. A. Gruver, E. McK. Goodwin; also F. W. Booth, general secretary and treasurer, and John Hitz, superintendent of the Volta Bureau.

Reports of officers and standing committees were made, and the General Secretary read his annual report, covering details relating to the publication and distribution of the ASSOCIATION REVIEW and of circulars of information issued during the year, the growth of the membership of the Association, the work of the Teachers' Bureau, and the Association finances.

A written report of the Committee on Summer School was presented, and after full discussion of the matter, the following resolution was adopted:

Resolved, That the Board of Directors of the American Association to Promote the Teaching of Speech to the Deaf, recognizing the value of the work accomplished by the Summer School for Teachers as conducted at the Clarke School, Northampton, Mass., in the past, urgently request its Board of Corporators to again conduct such a school the coming summer.

The following were appointed the standing committee on Summer School: A. L. E. Crouter, Alexander Graham Bell, E. McK. Goodwin, Sarah Fuller, and Harriet B. Rogers.

The final steps in the matter of the transfer to the Association by Dr. Bell of the property to constitute the Alexander Melville Bell Memorial Fund were taken in the drawing up, signing, and passing of papers. Later the American Security and Trust Company of Washington, D. C., was appointed by the Board as trustee to hold and manage the securities of the fund.

The following were appointed as a permanent committee of the Board to be known as the Melville Bell Memorial Fund Committee: Edmund Lyon, E. A. Gruver, R. O. Johnson, E. McK. Goodwin.

Miss Yale submitted the course of training to be pursued by the Normal Class at Clarke School, which after due consideration and some slight amendment was approved.

To meet a ruling of the postal department of the Government relating to the admission of the ASSOCIATION REVIEW to the privileges of second-class mail matter, section VIII of the by-laws of the Association was amended to read as follows:

SECTION VIII. All the members of the Association whose dues are paid in full shall be entitled to attend its meetings, lectures, and entertainments, and receive all its announcements and the ASSOCIATION REVIEW regularly for the current year, it being understood that three-fourths of the dues paid annually by a member shall be set aside as his subscription to the REVIEW.

The republication by the General Secretary of Miss Yale's pamphlet on "The Formation and Development of Elementary English Sounds" was authorized.

The next Annual Meeting of the Association was appointed to be held the coming summer at Jamestown, during the period of the exposition, the exact time and place to be announced later in a notice by the President. This will be a meeting of the members of the Association, in conformity to law, for the transaction of business. No literary exercises will be held at this meeting.

The election of officers of the Board for the ensuing term resulted as follows: President, A. L. E. Crouter; First Vice-President, Alexander Graham Bell; Second Vice-President, Caroline A. Yale; Secretary, Z. F. Westervelt; Auditor, E. A. Gruver; Treasurer, F. W. Booth. F. W. B.

THE INTERNATIONAL CONFERENCE OF TEACHERS OF THE DEAF AT EDINBURGH.

An International Conference of Teachers of the Deaf is to be held at Edinburgh on July 30th and following days, under the auspices of the National Association of Teachers of the Deaf of Great Britain and Ireland. American teachers have received, through Messrs. W. H. Addison and F. G. Barnes, now visiting in this country and representing the Association, a most cordial invitation to attend the Conference and participate in its proceedings.

THE REPORT OF THE PROCEEDINGS OF THE SEVENTH SUMMER MEETING.

As was announced in the December number of the REVIEW, this number is mainly given to the publication of the proceedings of the Seventh Summer Meeting of the Association, held the past summer at the Western Pennsylvania Institution for the Deaf and Dumb, at Edgewood Park, Pa. It was foreseen that the number would be extra large, and in order to keep the year's volume approximately to its normal size, it will be counted a double—the February-April—number. Thus no separate issue will appear in April, nor any issue until the regular June number. The convenience of having the full proceedings of the Summer Meeting in a single number will, it is believed, be appreciated by the members, fully compensating for the omission of the regular April number. Extra copies of this Summer Meeting number will be furnished at 50 cents each.

THE SUMMER SCHOOL.

As will be seen in our notes of the proceedings of the board meeting, the Corporators of the Northampton School have been requested to conduct a Summer School during the coming summer. At this writing we can do no more than hope for favorable action upon the request on the part of the Corporators at their approaching meeting. However, we would make the suggestion to all having it as their purpose to attend the school if it is held, that they communicate in regard to the matter at an early date with Miss Yale.

A DEARTH OF EXPERIENCED TEACHERS.

The Teachers' Bureau conducted by the Association has had in the past year far more calls for teachers trained and experienced in the oral method than it has been able to supply. In anticipation of a continuance and growth of this demand, it is urged that experienced teachers wishing positions, or wishing to change location, communicate their desires to the Bureau. A demand exists for teachers of successful experience competent to take charge of oral departments, and teachers desirous of such positions are invited especially to place their names with the Bureau. F. W. B.

NEW MEMBERS.

The following named persons have been elected to membership in the American Association to Promote the Teaching of Speech to the Deaf by vote of the Board of Directors. The list includes those elected since the last report to January 1, 1907:

Abt, Mrs. S. L., 5044 Michigan Ave., Chicago, Ill.
Akins, Anna M., 253 Putnam Ave., Detroit, Mich.
Allabough, B. R., School for the Deaf, Edgewood Park, Pa.
Arbaugh, Nellie E., School for the Deaf, Indianapolis, Ind.
Arbaugh, Laura L., School for the Deaf, Northampton, Mass.
Ball, Jessie, School for the Deaf, Morganton, N. C.
Bell, Mary M., School for the Deaf, Danville, Ky.
Bierbower, Fannie, 1304 Willson Ave., Cleveland, Ohio.
Bowles, Betty L., School for the Deaf, Ogden, Utah.
Branson, H. L., School for the Deaf, Edgewood Park, Pa.
Brown, Jessie, School for the Deaf, Edgewood Park, Pa.
Burton, Grace, 1304 Willson Ave., Cleveland, Ohio.
Carver, Leora, School for the Deaf, Council Bluffs, Iowa.
Chapin, Alma L., School for the Deaf, Columbus, Ohio.
Clemens, Martha A., School for the Deaf, Edgewood Park, Pa.
Cobb, Jennie L., 110 Colonial Apts., Wilkinsburg, Pa.
Cressweller, Ellen, Beech Lodge School, Aberdeen, Scotland.
Danver, Susie E., School for the Deaf, Edgewood Park, Pa.
Dimmick, Ella J., School for the Deaf, Edgewood Park, Pa.
Doneghy, Susan N., School for the Deaf, Danville, Ky.
Donohoe, Elizabeth M., 303 Farnsworth St., Detroit, Mich.
Downing, A. U., School for the Deaf, Edgewood Park, Pa.
Driggs, Frank M., School for the Deaf, Ogden, Utah.
Dumon, Lucy M., 197 St. Aubin Ave., Detroit, Mich.
Eaton, Blanche B., Oral School, Mystic, Conn.
Euritt, Mrs. Guilford D., School for the Deaf, Staunton, Va.
Fish, Kate H., Gallaudet College, Washington, D. C.
Gaw, Albert C., Gallaudet College, Washington, D. C.
Glenn, Frances L., School for the Deaf, Indianapolis, Ind.
Goggin, Anna Page, School for the Deaf, Austin, Texas.
Green, Mildred, School for the Deaf, Scranton, Pa.
Greeson, Prof. W. A., Grand Rapids, Mich.
Gruver, Minnie M., School for the Deaf, Mt. Airy, Phila., Pa.
Harvey, Mrs. W. Y., 3601 Spring Garden St., Philadelphia, Pa.
Henne, Ezra S., 407 W. College Ave., Indianapolis, Ind.
Hedrick, Maud, School for the Deaf, Columbus, Ohio.

Hoeffler, Anna, School for the Deaf, Columbus, Ohio.
Jacques, Aline M., School for the Deaf, Hartford, Conn.
Jastremski, Ernestine, 1000 Grove St., Jacksonville, Ill.
Jones, J. W., School for the Deaf, Columbus, Ohio.
Jones, Mary Davis, 181 N. Lafayette St., Grand Rapids, Mich.
Jones, Eleanor, School for the Deaf, Fulton, Mo.
Kent, Eliza, School for the Deaf, Jacksonville, Ill.
Lathouwers, A., Institut voor Doofstommen, St. Michels, Gestel, Holland.
Lilienstein, Mrs. E., 701 N. 7th St., Springfield, Ill.
Long, Margaret A., School for the Deaf, Columbus, Ohio.
Marbut, Musa, School for the Deaf, Hartford, Conn.
McCord, Jeanette Hope, School for the Deaf, Edgewood Park, Pa.
McNamar, Lena B., Williamson, W. Va.
Patterson, Hettie I., 1000 Grove St., Jacksonville, Ill.
Purdy, Margaret K., School for the Deaf, Edgewood Park, Pa.
Pybas, Adelaide H., School for the Deaf, Mt. Airy, Phila., Pa.
Read, Nancy B., School for the Deaf, Indianapolis, Ind.
Ray, John E., School for the Deaf, Raleigh, N. C.
Sister Marie Albine, School for the Deaf, 595 St. Denis St., Montreal, Canada.
Stead, Lyman, 649 W. Saratoga St., Baltimore, Md.
Stewart, R. E., School for the Deaf, Omaha, Neb.
Stewart, Stella, School for the Deaf, Mt. Airy, Phila., Pa.
Steidemann, Clara L., 4110 N. Eleventh St., St. Louis, Mo.
Stevenson, Estella, 1304 Willson St., Cleveland, Ohio.
Stinson, Carrie R., 920 S. Main St., Aberdeen, S. Dakota.
Stryker, Grace H., 100 W. 113th St., New York City.
Schumacher, Margaret, School for the Deaf, Columbus, Ohio.
Taylor, Mabel A., School for the Deaf, Danville, Ky.
Taylor, Virginia, School for the Deaf, Edgewood Park, Pa.
Templeton, Maria P., 612 Empire St., Ishpeming, Mich.
Upperman, Sallie A., School for the Deaf, Raleigh, N. C.
Walker, N. F., School for the Deaf, Cedar Spring, S. C.
Walker, Albert H., School for the Deaf, St. Augustine, Fla.
Walker, W. Laurens, School for the Deaf, Cedar Spring, S. C.
Willits, Charlotte, 188 Harper Ave., Detroit, Mich.
Wesselius, Sybrant, 407 S. Lafayette St., Grand Rapids, Mich.

WANTED—A competent oral teacher for a deaf child five years old. Good salary and permanent position. References required. Address, HENRY STEIN, 93 East 7th St., St. Paul, Minn.

WANTED—Two men teachers with oral training and experience to take desirable positions. Address the General Secretary.

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THE ASSOCIATION REVIEW

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FRANK W. BOOTH, EDITOR

June, 1907

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THE AMERICAN INSTITUTIONS FOR THE EDUCATION OF THE DEAF.[1]

G. FERRERI, ROME, ITALY.

CHAPTER XII.

SOME DIDACTIC QUESTIONS.

I think that the reader will now be desirous of knowing whether in the practice of the school, and in all the minutiæ of teaching, our colleagues in America have made greater progress than we. Now this I do not dare to affirm in regard to the scientific principles on which our didactic work is based; but I can say that in the practical part they have gone much farther than we have.

One must observe in the first place that on account of the great liberty which is given to the teacher in the American schools, one hears discussed as something new, questions that have long since been laid aside in our special literature in Europe. However, while in Europe these questions have remained mere theories, in America they are put to the proof of practical experience, and thus a judgment can be made favorable or not, and a decision taken for the future.

Everything considered, our colleagues across the Atlantic have two great advantages over us: the material and moral organization of the schools, and the much greater length of the scholastic course. They are advantages which permit them to experinent with every new proposal made in Pedagogy and Didactics, ınd to provide better for practical results. But in order to show this more clearly, I will treat particularly the most vital questions ınd also those of general interest for our schools.

[1] Translated from the Italian for THE ASSOCIATION REVIEW, by the author. Begun in the June, 1904, number.

§ 1. Pronunciation and Speech.

It has recently been noticed by the American teachers themselves, that the oral method is in a period of truce in respect to the increase of the schools which are more or less oral. However, one must not think that this means loss of faith, nor arrest of development. Even a superficial visit to the schools would persuade one that this inaction is more apparent than real. All the energies of the principals and teachers tend to one and the same object, which is to establish in the most definite manner possible, the fundamental principles of teaching speech to the deaf. And the effect of this collective tendency is seen also in the institutes where the combined system includes the teaching of articulate speech.

Notwithstanding the beneficial effect of all this study and labor to render the teacher more capable of his mission, there exist marked divergencies in regard to the teaching of speech.

For the sake of brevity, I will merely allude to two of these divergencies of opinion, as those on which principally depend the practical direction of the school of articulation:

The first is that of the absolute and relative value of the vowel and consonant elements of the word in regard to its intelligibility.

The second is the same one which was discussed at the Conference of Zurich in Sept., 1901, by the Director, G. Kull, on the subject: "The teaching of articulation in the schools for the Deaf, should it be analytical or synthetic?"

As to the first of these questions, we cannot discuss it on account of our incompetence, the difference between the two languages—Italian and English—being so great, that while with us the vowels are the foundation of speech, they may have in English only a secondary importance.

Dr. Bell, who is certainly an authority in matters of Phonetics and Elocution, affirms that in English the vowels have a secondary importance to that of the consonants in respect to the intelligibility of speech. It is just the contrary in our language. We can say to the teacher of articulation: "Make sure of the vowels and the pronunciation will be intelligible, even if some of the consonants are not perfect." It is true, however, that also in Italian the fundamental sounds of the vowels undergo variations in the accent of the word, but these variations are never such as to alter the position and the specific sound of the vowel. Perhaps it is due to this condition that the Italian language is the

most susceptible to the metrical form of the classical languages (Latin and Greek); while in English, at least at present, the classical rules for determining the length of the syllables are quite useless. In order to render artificial pronunciation intelligible in English, it is necessary above all to reach perfection in the consonant sounds, and perhaps this is an advantage for our colleagues of the English tongue, as the number is almost unlimited of fundamental vocal sounds and of those modified by the various consonants which precede or follow them. Besides, the English language is preëminently monosyllabic, and therefore in the phonetic grouping of the sentence the same word may be now *protonic* and now *postonic*. The intelligibility of the sentence depends, however, more upon the accent of the phonetic grouping than upon the individual value of the syllable or word. This, to tell the truth, happens also more or less in other languages. Indeed, the speech is not intelligible always on account of the fluidity of the vocal sounds and the clearness of the voice, but it is so on account of the tonic accent of the word and sentence. But if we consider well, in our language the accent falls exclusively on the vowels, and the intonation of the laryngean sounds covers, like "the mantle of charity," the multitude of defects in the word, and gives us the acoustic illusion of having heard the word pronounced perfectly, when it is really our ears that complete it according to the well-known accent of the sentence. But as to this, in every language we must be indulgent to the deaf, rendered a speaker by art. No matter how hard we may try to perfect his speech, it will always be the duty of normal persons to accustom themselves to the speech of the deaf.

The few exceptions which are presented to us by pupils who have regained in the oral school a clear voice and fluid speech and also not lacking in a certain intonation, only serve to confirm the rule. They are, however, an advantage to us because they keep present before us the ideal of our work, which can never be reached, but can be more or less approached. But when we present such cases at our public exercises in order that they may pay the expense of the ceremony, we cheat the public and deceive ourselves. The æsthetic, musical quality of speech will always be wanting in him who lacks the sense of hearing, which is the only means for correction and perfection of speech.

Visiting one day a school in America, I was struck by the answer of a boy who said in a clear voice and with natural pro-

nunciation, "yes ma'am." I said at once to the teacher: "That boy can hear a little, or he has heard lately;" and it was really so. "Well," I added, "we must be satisfied if the others succeed in saying yes, without anything more."

The other of the two questions, although connected in part with the first, has now become of general interest. We also have often asked ourselves whether it would be better to follow the analytical or the synthetic process in first teaching speech to the Deaf and Dumb.

Now, in order to avoid a misunderstanding a consideration is necessary. Mr. Kull, already referred to, calls that process of teaching synthetic which, starting with the elements, comes step by step to the formation of the word and the sentence. I, instead, have always called this process analytical, in conformity with what has already been written upon synthetic lip-reading.

That process of articulation, on the contrary, should be synthetic which those claim to follow in saying the entire word to the deaf from the very beginning without preoccupation as to the elements which compose the syllables and words. Also Prof. Fornari, in translating the thesis of Kull, found himself in front of the same question, and wrote an article to demonstrate that both parties were right, as the matter depended upon the way in which it was considered. (See *Rassegna di Napoli,* February, 1903, pages 26-27.) An explanation is therefore necessary in regard to it. I shall call that process analytical which is generally followed in the schools of articulation, based first upon the works of Bonet and Amman, and then upon those of the modern educators who followed its principles (Goguillot and Marchio, for example).[1]

[1] This may seem to some a question of words and nothing else; but when on the words is founded the denomination and the distinctions of the systems taught, there is the obligation of understanding them well, in order to avoid useless discussion. Hence, I think it necessary to add a few words on this subject: In my opinion, one should make a distinction between the *learning* and the *teaching of speech.* The first, which indicates the activity of the pupil, is accomplished by a process of *synthesis,* and this makes evident, in respect to the word as to every other object of learning, the fact of the parallelism of the genesis of knowledge in the individual and in the race. The second, however, being the activity of the teacher, who knows the whole of what he must teach, can only be accomplished by a process of *analysis.* In fact, to limit ourselves to the articulated word, the teacher of the Deaf teaches his pupil the Oral *elements,* not as an independent, isolated matter, but in respect to the reproduction and recomposition of the whole word which he knows. Indeed, he knows it so well as to understand that it would be a loss of time to teach the *whole* word at the beginning to the deaf pupil. Therefore, he separates

I have seen that in the best oral schools of the United States they follow this same process as regards articulation, but they prefer to go on with the synthetic lip-reading. In this way the children of the kindergarten and the pupils of the first course are rendered capable of reading words and sentences from the lips before they are able to reproduce them with their own voice. And this one understands. In order to read from the lips a word or a short sentence, or better still to get from it the synthetic, optical figure, it is not necessary to know part by part the elements which compose it; but on the contrary in order to reproduce one and the other, it is indispensable to reach the synthesis by way of analysis, and to reproduce one by one the vocal and consonant elements from which the whole results.

It has been demonstrated by the greatest teachers of Germany that it is necessary for the best success of our teaching, and hence more suitable and opportune, to follow the process used until now, that is, "passing from the single elements to the phonetic unity of the word and sentence." I will therefore refer the reader to the most recent publications on this subject, and pass on to speak of the state of the question in the American schools.[1]

The American advocates of the synthetic process (which seems to me an error after the observations I have made in the schools of the United States), maintain that the analytical process is not natural but artificial. However, they wish that one should speak to the deaf child just as to the hearing one, and in this they accept the great principle of Mr. Hill in all its extension: "Develop language in the deaf-mute in the same manner in which it is done by nature in the life of the child endowed with all his senses."

Now, it seems to me that there is a misunderstanding here. It is true that one does not teach the hearing child the elements of speech singly, for it learns to speak from hearing as well as by sight; but can one therefore state that the hearing child learns speech by the synthetic process?

Meanwhile let us consider the facts.

The hearing child, in the long process of learning speech,

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it and *analyses* it and gives his pupil the simple elements, in order that the pupil, by a slow process of *synthesis*, may in his turn compose and reproduce it. In this way one follows the natural process, as I have before tried to show.

[1] Protokol der XXVIII. Konferenz württembergischer und badischer und der X. Konferenz schweizerischer Taubstummenlehren am 9, 10 und 11 Sept. 1901, in Zurich, page 48–70.—(See *Rassegna della Educazione dei sordomuti*, Jan. 1903, page 10.)

always starts with the phonetic elements, coming step by step to the pronunciation of the entire word. Every one may have observed, as I did some years since in observing the development of speech in a hearing child:

1. That the normal child in its first attempts to reproduce the word, associates the acoustic images with those of sight, directing the eye constantly towards the mouth of the speaker.

2. That in these attempts the normal child repeats aloud, as well as to himself in an undertone, the single syllabic sounds which have made the greatest impression on him, and which he wishes to repeat in addressing the word to the persons who approach him.

3. That in this process of learning words, the normal child also succeeds in imitating the oral sounds according to the order of their mechanical difficulty and of their adaptation to the various parts of the vocal organs.

This does not prevent their saying at an early age words that seem to be entire, but which are only understood by those who are accustomed to hear their childish jargon every day.

No one therefore can doubt the fact of this graduated difficulty in the adaptation of the vocal organs, and in the phonetic perceptions which are shown in the counter-proof offered to us by the mothers and nurses:

1. Who foster in the beginning (and sometimes so long as to injure the correct pronunciation of the child), the childish defects of speech, changing the consonants into others which are easier, mutilating in fact the language in such a way that it would hardly be recognizable, were it not for the vowel sounds, when indeed these are not too cruelly tortured.

2. They contract the long words, in which the succession of vowels and consonants is varied, and the result is that one hears only the pronunciation of the last consonant or of some one near it.

3. Besides, it is too common a thing to have escaped the observation of any one, that certain lingual sounds, simple and compound (r, s, gna, glia, z), are acquired by the hearing and normal child later than the others, limiting ourselves here to the Italian language. Indeed sometimes the mechanical difficulty in imitating them is so great that the child does not speak them perfectly even when he enters the primary school.

Besides, it is very common to say that a normal child stutters, when he is not yet capable of imitating articulate speech to perfection.

From what has been said, not to be verbose, it results that really every child learns to speak by an analytical-synthetic process. It starts with the elements of the word, and only by means of innumerable repetitions and attempts at imitation it succeeds in composing with its lips the entire word as a phonetic whole.

Therefore, in my opinion, those oppose the natural process of learning to speak, who claim to teach the deaf-mute at a very early age to pronounce by repeating to him the entire word without first preparing his organs by means of analytical exercises, and without insisting on the correction of the elements pronounced.

As I have already observed, this is the negative method which they wish to apply in the kindergarten school of Philadelphia (Bala), and worse still upon which they wish to found a Normal School for the training of teachers.

In all this matter, there is, I think, a great misunderstanding. And in this idea I have been confirmed by a treatise by Miss Garrett which I have just read in order to give a more exact account of what she had said to me personally:

"Every one with whom a deaf child comes in contact should talk to it and encourage and aid it to articulate. Deaf babies begin to say *ma-ma-ma*[1] just as hearing babies do, but as a rule, it is not encouraged in them;" she then adds: "if it were, and the child properly guided to further articulation, it would talk." Ah! but there is one sole difficulty, whether the deaf child can be properly guided by the first one with whom it comes into contact, as certainly does happen to the normal hearing child, who listens long before it speaks, repeating then at first only the elements of the word heard, and of these elements only those in which the proper dynamic relations have been established between the various components of the mechanism of language. Now it is clear that this difficulty cannot be overcome without preparation, and without a systematic process of teaching.

From the observations and comparisons made in the various kindergarten schools and in the first classes of the special institutions, I can conclude that articulate speech is taught to American and English deaf children with the best results when the analytical method is used, and where they proceed in the same manner as in

[1] And this *ma-ma-ma*, is it not a proof of the process of analysis? It is all very fine to say that *analysis* kills spontaneity, but in our case Rhetoric does not help much, and it is necessary to sacrific the ardor of synthesis and follow a minute and patient analysis. After all, this is the natural process, even for a normal child.

our oral schools.[1] That which is acquired more easily is the synthetic lip-reading, but this depends on the fact, already noted, that the English language is composed, at least two-thirds of it, of monosyllabic words, or of those which can be reduced to such in the pronunciation with a predominance of consonants. Hence the advantage of making the deaf understand early the practical value of their efforts in the oral instruction.

One can make every compound syllabic word assume the meaning of a normal word, independently from the way it is written.

It must be noticed in regard to writing, that in some schools the children learn simultaneously by lip-reading and writing, not only a vocabulary of nouns (beginning with the proper names of their school-fellows and relations and of the personnel of the school), but also quite a long list of familiar phrases and commands, warnings, and judgments, which form the solid base of a linguistic patrimony. This advantage is reflected also in the acquisition of the spoken word, from the well-known fact of the association between the various sensorial images as stimulus and material of perception.

In other schools where they do not admit the importance of the elements of the word, they postpone the writing. They associate the entire word with the object, image, person, and action, but not with its written form. And in this respect it happens to the deaf as to the uneducated hearing, who do not know how to write the words which they have had on their lips for many years. This, however, does not make any impression in an English-speaking country, where every one must tell how he writes his name, or that of some one to whom he refers in conversation and who is not personally known by the person spoken to. And this which is said of proper names should be repeated for all the words heard for the first time, even by educated people. The reason of this lies in the arbitrariness of the pronunciation, and in the difference in pronunciation in different mouths.

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[1] The English language has, however, special exigencies. Every instruction of the elements should be subordinated to a real and exact system of phonetic writing, in order that the pupil should accustom himself to translate the written word orally. This has not, in fact, an absolute value, as the pronunciation of vowels and consonants depends in a great measure upon their various positions in the different words. In some schools I have seen special tablets on the walls, to which the attention of the pupil was called in order to make him remember the phonetic value of certain combinations. All this is said in regard to the best organized oral schools.

Before closing this paragraph I wish to allude briefly to another question which greatly interests the oral teacher. I mean that of the quality of the voice in the deaf who are taught to speak at a very early age.

I did believe, and theoretically speaking there is reason to consider it true, that facility of vocalization and fluidity of pronunciation must stand in relation to the earliness of the instruction. Success in this should be still easier to attain where precision in the elements of the word is not insisted upon, and where one is satisfied with any mechanical imitation. It is enough if the child moves its lips and emits a sound, no matter how indistinct, which impressed me as a laryngean mumbling. The teacher always approved of the result, and then sent the little one back to frolic with its mates, until it should come in its turn again to pronounce a *larva* of speech, which the teacher herself only understood by indulgence. This, to tell the truth, also happens in the beginning in those schools where they make use of all the noted manœuvres of the oralists, the indication of the point of articulation, the position of the vocal organs, and the adaptation of the various parts of the mouth. But as they try to seize the opportune moment for the natural education of the voice, it frequently happens that we hear some very clear voices which give hope for the future. At the first glance one naturally thinks that the kindergarten must offer the most favorable conditions:

1. For the naturalness of the voice.

2. For the fluidity of speech, which depends on its exercise and development when the vocal organs are in the highest degree flexible.

However, in the later results of the teaching these advantages almost entirely disappear, and "the voice of the deaf" is a fatality for all, even before the change of voice which becomes a common disaster for the children who had a natural stimulus in the traces of hearing remaining to them, as well as for those who began to speak at a very early age. So that in the course of instruction they cannot be distinguished from those who never had been to the kindergarten.

In conclusion, the early teaching of the oral method does not give those advantages which had been hoped for from theoretic reasons, in the physical and physiological conditions of the vocal organs. Hence the same differences between boys and girls, the same defects in the hypertrophic development of the larynx, the

same exaggerations of facial mimic, as in the movement of the tongue and jaw in the production of sounds and words.

It is now believed, and also formerly it was believed by some of the colleagues, that these defects might be overcome by applying the following rules in the first teaching of speech:

1. Divert the attention of the child from the points of articulation, and, above all, from the larynx.

2. Do not insist too long at one time upon the correction of certain sounds, and upon the precision of the single positions.

3. Be very parsimonious in the use of touch, directing the attention to the diaphragm rather than to the chest and to the throat, for regulating the breathing and the holding of the breath.

These are the rules which certainly should improve the work of the teacher of articulation; but they do not give, as far as I have been able to observe, all the desired effects.

Based upon these rules we can therefore establish this general rule: "The less consciousness the deaf pupil has of his own movements, the less exaggerated and the more natural will his pronunciation be."

§ 2. The Teaching of Language.

The art of instructing the Deaf comprehends two distinct parts, as Dr. Wallis remarked more than two centuries ago. The first part, which is entirely mechanical, has for its object to train the pupil in artificial pronunciation of words, substituting, as far as possible, for the acoustic stimulus, that connected with sight and touch. It is in this first part that the school for the Deaf is distinguished substantially from that for the Hearing, who bring with them to school the fundamental means for learning to read and write the language which they in infancy have learned without any apparent study or fatigue. The normal child in fact knows the phonetic symbols already when he sets himself to learning to read, and his task is limited to learning the graphic representation in letters, syllables, and words. Hence, all that Didactic art has to do for him is to place in relation to each other the visual image and the acoustic image of the word, which would be very easy and quick to do if only the alphabets were perfect and had as many signs as there are symbols and phonetic images of words. However, where perfection is wanting, custom interposes, yet not so well, however, as to prevent the hearing child from laboring under the deception of sounds, which in the beginning are an obstacle

to the substitution of written signs for the phonetic ones, or *vice versa.* The exercise and practice of the mutual exchange in dictation and in reading establish the necessary habit, however, and the normal child after three or four years of school learns to read and write, developing at the same time his first ideas, which are then easy steps to higher ones.

In the school for the Deaf this task is necessarily delayed, because one must first of all put the pupil in possession of the phonetic elements of the word. And as he cannot acquire these elements without a substitution of stimulus, a special process is required based upon the physical-psychic fact of the mutual relation between sight and speech.

Certainly the task of the teacher of articulation is not an easy one, but his work is aided more or less according to the case, by the relation existing between the various functional zones, which, in the deaf child as in the hearing one, are connected one with the other, just as the one influences the other every moment of the psychic life.

The advocates of the combined system believe, nevertheless, that the early teaching of articulate speech is a loss of time for teacher and pupil, and that it delays the intellectual development of the Deaf and their learning of written language. They wish to base the first instruction on writing, aided by the mimic and the manual alphabet, because they believe they can in this way most easily and with the most appreciable results promote the learning of language as the organic instrument for the development of the intelligence.

This I have never believed, having observed in the practical work of the school that this apparent loss of time which we dedicate to the slow learning of mechanical speech, is afterwards compensated for by the greater elasticity and rapidity of the association and mutual exchange of the different neuro-psychic factors in speech—an elasticity and quickness acquired by the Deaf exactly on account of his early oral training. I had, in short, recognized the great intellectual value of the functional consolidation of those factors. From this comes my faith in the Oral method, applied even, if not by preference, to the Deaf who are intellectually weaker. If it were not for the repeated accusations of my eclectic colleagues, that is, of those who think they can demonstrate by facts that the intelligence of the Deaf develops more quickly and, therefore, one can soar with them to greater heights and with

greater freedom in the high grades of scientific speculation if, renouncing Oral training, they give its place to writing, the mimic, and the manual alphabet. This accusation, I say, had somewhat shaken my faith in the last years. I was, therefore, very glad when I was able to undertake an accurate research in regard to the results of the teaching of language in the American schools.

At the beginning of my research I was still in doubt, because I obtained certain knowledge that our colleagues on the other side of the Atlantic obtained superior results in teaching language to what we do. But when I had gone more thoroughly into my researches, I soon assured myself that these good results were not in the least owing to the help of the mimic and the manual alphabet, but only to the method, first occasional-objective, and then grammatical, applied during a course of years much longer than in our schools.

In regard to the first objective teaching, one must note the fact that the teachers in the Kindergarten and other schools for the Deaf are very skillful in the use of drawing, as an occasional didactic expedient. Thus they can represent to the child things and actions by means of improvised illustrations, which, besides giving immediately the idea which one desires to communicate, translates ***hic et nunc*** the ideas of the pupil, which he does not know how to manifest.

Thus the school in its first instruction is always animated by the action and the art of the teacher. The benefit of this activity of the teacher is favorably reflected in the pupils, who do not find time to feel bored, and are stimulated to imitate and reproduce what they see done, written, and represented.

When the grammatical grade is reached, the teaching of language becomes theoretic-practical, and the exercises repeated for years, end by impressing on the minds of the children the correct morphology of words and their position in the sentence.

I have observed that in the American schools they are not afraid of Grammar, and perhaps from this is derived the result of a better education in general and of the Deaf in particular.

Although in the various States of the Union there is the greatest liberty in teaching, and, therefore, a great variety of textbooks is used in every branch of the primary and high schools, yet, if not the book, still the method is common in which Grammar is taught. The method is based upon diagrams. The pupil is trained by a great variety of exercises to recognize in the mute

diagram, drawn on the blackboard, the place of the various logical parts of the proposition.

They start with the simple diagram, divided in three columns for the three essential elements of a sentence, to arrive gradually at placing, according to the rules of the English language, of every part of the most complicated sentence. One must notice, however, that the English sentence is the simplest of those of modern literature, and all the difficulties are reduced to the distribution of the parts of the simple and compound proposition. Each pupil is accustomed, from the beginning, to draw in his copy book and on the blackboard the grammatical diagrams, and this ability enables him not only to think always of the synthetic arrangement of the sentence, but also prepares him to correct a sentence that is wrong or incomplete. Hence, it is an easy task for the teacher of language to correct the school-work and also to teach language. They dedicate lessons to this daily, even in the Oral schools, until the end of the school course. Which is to say that the Deaf are exercised in composing sentences daily for eight and ten years, if not longer. Therefore it is, that even those of mediocre intelligence must from necessity learn to express their own thoughts in correct sentences.

In the grammatical instruction they generally use the text-books of the public schools, but I have also found, here and there, some systems in manuscript and in synoptic tables, compiled by the teachers of the Deaf. One of the most noted systems is that of Wing, more or less modified by the addition of graphic symbols which they alternate with figures and letters for designating the quality of the verbs.

Lately the desire was expressed that the colleagues should unite in adopting one unique system. This union would be most advantageous for the Deaf who follow the course of study at the College of Washington, where it is necessary to have a determined system for teaching Grammar. This facilitates not only the teaching of Latin and French, but offers to teachers and pupils an easy, common means of correcting their tasks in the English language. For there is one thing to be remembered, which generally escapes observation, for reasons already mentioned, of him who has not considered the higher course of studies for the Deaf. Not all the Deaf who attend the classes of the National College succeed in finishing with honors. Not even one-half of them succeed in obtaining the Academic degree; very few, after five or more years,

receive a certificate, and nearly half of them leave before finishing the course. Now if one seeks the cause of this phenomenon, one finds that generally the students fail for lack of preparation, which lack is manifested principally in the limited use of language and in the small progress made in mathematics.

I inquired of different teachers in the National College as to how the exercises were written by the pupils, and the answer was that, for example in the exercises written in History, there would always be some mistakes of Syntax, at least during the first years.

In extending my research in the Institutions where they teach orally, I had the satisfaction of ascertaining that the Deaf taught by the Oral system are never inferior in this respect to those prepared for higher studies by the Combined system. Which leads me to conclude that the reproof made to us for years by the Eclectic colleagues has no foundation.

The Deaf of normal intelligence learn written language whether it is taught them in union with gestures, or by the spoken word. The less intelligent and the weak cannot ever learn it to perfection. The advocates of the Combined system believe that, when these last return to their families, with the use of the manual alphabet and writing, they will succeed in gaining a livelihood; but I believe, after seeing the results of the Combined system, that the Deaf of little intelligence who have not learned, or learned very imperfectly, to speak, will return to that isolation from which they were taken when they entered school. For many, writing and the manual alphabet are of no use whatever. Therefore, I am obliged to return to my first opinion, that if these individuals had been taught speech with a better method and with more perseverance, they would have it as a comfort and help for an always limited communication with the society in the midst of which they must live their life.

It is, perhaps, unnecessary to add that in the schools of the Combined system the Deaf of little intelligence are not more alert nor more interested than in the Oral schools. I have seen, for example, that the Deaf of little intelligence do not go farther than the noted description process in their compositions: "This is a cat. It has four legs. It looks for mice," and so on.

In the exercises of reproduction, there are scarcely found the principal ideas expressed by the teacher with gestures, which return, mutilated and disconnected, in the written exercise. Having once made this observation to a deaf teacher who was correcting

in my presence some of this work, the colleague desired me to notice that the exercise was new for the given pupil; the others had written it many times, and, therefore, they made fewer mistakes. From which I deduce that all the world is one country, and that the Deaf of little intelligence everywhere will remain far, very far, from the University.

§. The Love of Reading.

An efficient means of instruction for the Deaf in America is the individual exercise of reading. Every educator knows that the love of reading is derived first of all from the ability to read. Our pupils do not read, and, therefore, it is impossible for them to get the habit; but they do not read because they do not know how to read—that is, because they do not understand the books. Yet, it is indisputable that this would be most useful to them in acquiring their later education and as a comfort in life. They do not read because, besides that a literature is lacking for the young among us, also the time necessary for reading is lacking to our pupils. In America, as I have already observed, the school course is almost unlimited, so that the young who have an inclination to read, and who are encouraged and helped to do so, may acquire this habit and so increase their culture of themselves, independently of the school and teacher. It is true, as Mr. Roberts of Edgewood Park observed at the last Congress of the American teachers of the Deaf, that pupils are not lacking who make believe to read, because they know how to translate the words of a book into the manual alphabet; there are also those who know how to translate the words of the book into signs; but when they are asked to reproduce it themselves and to say what they have read, they are not capable of quoting one of the thoughts of what they believe they have read. We also have had experience of a similar phenomenon. Indeed, I may say that the illusion in this case is not the sole privilege of the deaf pupil, but extends also to their teachers. I have known several teachers, both of the Oral and Mimic systems, who would make others believe that the pupils had really acquired a certain fund of knowledge merely because they were able to repeat aloud, or in writing, the expressions with the correctness of a phrase committed to memory.

In the American schools, however, this happens rarely, and I was able to ascertain that a love of reading is very general

among the pupils, from the seventh to the twelfth year of school. There is no doubt whatever that, in this period, if the pupil reads, he understands enough of the language to receive a real intellectual pleasure from reading. I do not mean to say by this that the habit of reading cannot be acquired sooner than this by the more intelligent pupils, for this habit always stands in proportion to the knowledge of languages. Besides, they have in the school suitable reading exercises for making the pupils understand the utility of reading. Among other exercises of this kind, I remember the following: They give the pupils passages to read from a book, magazine, or newspaper, and then require them to reproduce in writing, in from five to ten minutes, what they have understood in reading. This causes a most useful interchange of ideas between the pupils, and between them and their instructor, because the teacher must use his skill in making the most he can of the intelligence of his pupils. The questions one hears in this case are not the stereotyped ones, such as *What is your name? Where do you come from? How old are you?* etc.; but the object of the teacher is shown in questions like these: *What do you think of it? Does it seem right to you? What would you do in such a case? What do you think would be best to do?* and so on. As is easily seen by this simple example, the energy of the American teacher is constantly turned towards the development of the intelligence; the exercise of the memory is put in secondary place.

Another circumstance which is favorable to the habit of individual reading is, the quantity of books and magazines for children, which makes it possible for every school to be well provided with them.

Besides, it must be admitted that the love of reading in the United States is a spiritual gift, which is hereditary and is cultivated by mutual imitation and emulation. One would feel inclined sometimes to say that there is a mania for reading here. At every hour of the day in every place one sees people of every class, sex, age, and condition reading books, magazines, and newspapers of every kind. Many persons who, on account of professional or business reasons, are obliged to stay for some time in the train, electric cars, etc., provide themselves with something to read, and manage to accomplish it even when the crowd obliges them to make their journey in a most uncomfortable position.

Moreover, facility to educate oneself and love of reading

are two things which are mutually related, and the one cultivates and strengthens the other. The beneficent effects of this are seen in all the phases and manifestations of American life. The Sunday rest from work, which is largely and scrupulously observed, whether as a physical necessity or as a spiritual need, gives opportunity to every one to dedicate some hours to the culture of the mind. In order to make it easy for every one to satisfy this need, the public libraries and institutes of Fine Arts remain open all the afternoon and evening of the holidays. Besides, the public libraries will also furnish without any difficulty every kind of literature, either amusing or instructive, to those who prefer to remain at home.

In regard to the Deaf, I have noticed that there may be lacking in an institute a special library for the teachers, but never for the pupils. In all the schools, the book soon takes the place of the teacher, and this redounds most advantageously for the young for the culture obtainable in the years following the school life, for which this should be a real and true preparation. Thus, the boy is persuaded that, although in life he may not find a teacher, yet, books will always be at his disposition. He learns quickly, therefore, to make use of them to increase and enrich his knowledge and to pass his time profitably. This is done more easily and naturally because reading, as a means of passing the time usefully, is not obligatory. The boy not feeling himself forced to do it, devotes himself to it with perfect liberty of choice and judgment, and this stimulates and strengthens in him spontaneity and the spirit of enterprise. I think one should refer to these characteristics of the Americans, the fact, which is confirmed by statistics and history, that "America is the country where one can make the longest note on auto-didactics."

The advice and the explanations given occasionally by the teachers coöperate in increasing and cultivating the taste for reading, not to mention the use of books of help, such as dictionaries, encyclopedias, directories, atlases, objective collections of every kind, popular books of science and history richly illustrated, all at hand, always and everywhere, for whoever wishes to read and study.

Added to this, the taste for reading is increased by the love of books, and every pupil, even in the schools for the Deaf, can make his own little library. This will not cause surprise, for our pupils too are very fond of making a collection of books. There

is, however, a great difference between our pupils and those of the American schools. Ours like to accumulate books to read bye and bye . . . at home; the American pupils, instead, make a collection only of the books which they have read.

There is in vogue in many schools this good custom. Of every book taken from the library or received as a gift, the pupils of the higher classes must write a brief account, within the limits, it is understood, of their capacity. From this comes a great advantage for the reader, who receives suitable explanations, and also for his fellow-students who are either stimulated to read the same book on their own account, or at least receive a sufficient account of it to know something of its contents. In this way knowledge is multiplied by mutual communication, it is better assimilated, and it becomes common property.

Another thing happens also. With us it happens that we know almost perfectly the vocabulary of our pupils, which comes from the circumstance that they have learned it only in school hours and from the direct instruction of the teacher. With the American teacher it is not so. He often finds his pupils using a vocabulary which he knows he has not explained. And this is a great advantage for the progress of instruction. The pupil himself offers the teacher an opportunity of giving explanations which he perhaps would not have thought of, and the teacher has greater liberty in the use of language, and so avoids the danger, which we are always in, of choosing only the easiest language, and in this way to limit, without being aware of it, the field of knowledge and of ideas.

I read recently, but do not remember whether in a newspaper or a magazine, during the last weeks of my sojourn in Boston, that the general instinct of the Americans for reading is only a form of laziness. I do not wish to make this the subject of a discussion, but I hold that, when a boy from reading for a mere pastime, either from laziness or for amusement, passes on to the study of the authors and acquires a mass of useful knowledge for the development of his own intelligence and for practice in life, this laziness becomes a valuable coefficient of culture. This, it seems to me, is an end which entirely justifies the means.

From what I have said, it results, first, that the love of reading among the Deaf in America is an effect of imitation, caused by the influence of the surroundings; second, that the extraordinary degree of development of this instinct is due principally

to the length of the course of study and to the profusion of books in every school.

These are conditions which we can only envy. But, however, I do believe that we might obtain something more in this respect if we devoted greater care to encouraging and helping our pupils out of school hours. We ought to accustom our pupils to reading, and to make an effort to understand as much as possible without the direct help of the teacher, for it often happens in our schools what Rousseau observed concerning the criticism of an author one reads. If the teacher constantly guides the pupil, he will only see with his eyes, and when those eyes are lacking, he will not see anything. (See *Émile,* Book IV, Vol. II.)

§ 4. Branches of Instruction.

In the American schools one sees applied in all its fullness the fundamental principle of our didactics: "Every matter of instruction is an object for teaching language." The special lesson in language is a lesson in grammar, in reading, composition, and analysis. But the vocabulary and the signification of idiomatic language are explained in every branch of study. The so-called rotatory system of teachers and classes is adopted quite generally and gives excellent results, not only in the development of various kinds of knowledge, but also in the acquisition of a larger vocabulary, and in the exercise of speech-reading.

I was a convinced advocate of this system, and had proposed several years ago the division of the branches of study between the different teachers of the school where I have passed the best years of my life. The practical experiment, however, did not succeed as I had expected, and this was entirely from the want of a technical Principal who could know how to superintend the work of the different teachers. After a few experiments I was, therefore, obliged to ask again for the entire responsibility of one single class.

Even though I was obliged to renounce this system, for reasons to be explained later, I continued to believe that this system of the division of the branches of instruction between the different teachers is the best and the most efficacious, especially in the oral schools for the Deaf. The different manner in which each teacher manifests his own energy and didactic talents; the exchange of classes; the exercise of speech-reading made daily on different lips; the multiplication of opportunities offered for the

teaching of language—these are so many unquestionable advantages not only for the pupils, but also for the teachers themselves. This which I held as good in theory, in spite of my unfortunate experience, I had the satisfaction of finding good in reality in the schools of the United States, where they apply the oral method with conscientious teachers under the guidance of intelligent Principals. Hence, I do not hesitate to affirm that the schools of the Deaf should be organized on a basis of rotation if one wishes to obtain the best results in the practice of the oral method.

In America they do thus.

To the teacher of language is reserved the exercise in Grammar, that is, the explanation of the laws of Morphology, and of Syntax; but all the other teachers must explain, in their turn, the special vocabulary of the specific branch, and they will stop when it is necessary to recall words and phrases, which from analogy and synonymy, explain the new language presented.

With the exception of the good application of the rotatory system, I have nothing else to note in regard to the systems used in the American schools for teaching the branches of general culture. The fundamental principle is, that everything tends towards the end and aim of the oral schools, and which a lady Principal abbreviated with much good sense into this simple sentence: "To speak, and to make them speak." This is all! Notwithstanding, I will repeat briefly the few observations I find written in my note-book, and which resemble one another so much as to be identical for the various schools to which they refer.

The objective method of teaching prevails, and every school has all the material means adapted for it which didactic art has suggested. I have already referred to the liberty given to the teachers of collecting books, newspapers, illustrated cards, drawings, landscapes, and photographs of every kind. I must now add that all this matter facilitates and illustrates the teaching of history, geography, and natural history, and serves to give a clear idea of the various natural and industrial productions.

In the teaching of arithmetic, more than the material calculations of millions and billions—almost always useless because so far removed from the real life of the poor deaf-mute—they pay attention to the simple needs of life, and proceed with the use of weights, measures, and small change in money, exercising the pupil, even from the primary class, to judge at sight of the various dimensions, weights, and the value of common objects.

And by so doing, they put into exercise the different senses, including the muscular one, and thus prepare the pupil for real life.

The study of geography is not a dry nomenclature of capital cities and of populations. The pupils must be exercised in recognizing, first, on a special table (where the teacher from time to time makes a cast with clay and water of the parts of the globe which are the subject of the lesson), and then on the map of the points where the cities are situated; then to draw with a free hand the portion of the map studied; to indicate the ways of access, whether by land or water, to the place spoken of. Besides this they give the pupil information about the population, customs, products, industries, commerce, on the politics, and on the various species of flora and fauna of the different places. So that in the review of the lesson, the questions are heard: *What do you know of this or that people? What are the relations existing between this and that nation?* and so on. From which it is easy to understand that also the teacher of geography has his task of explaining the language appropriate for the lesson.

Also in drawing, a practical aim prevails, and they prefer instead of artistic drawing, which is reserved for a privileged few who show especial talent, the free-hand drawing, aided later only, and in view of the exercise of arts and trades, by that of lines and geometrical.

Even in the Kindergarten the children are given free use of a series of chalk and colored pencils, in order that they should occasionally represent, in their own way, persons and animals and objects. Afterwards, during the course of teaching language, the children are obliged to represent with free-hand drawing a series of actions logically coördinated. This is a very useful exercise, as the children accustom themselves early to interpret the meaning and the value of the scenes represented in the newspapers, magazines, and illustrated books. Sometimes it is the teacher who, by means of illustrative drawing, gives the class an account of something which has happened, obliging the children to find the corresponding linguistic expression. Another time, it is the pupil who illustrates by drawing, a story read, or learned, or observed. At first one has to do with a very elementary style of drawing, resembling the infantile drawing studied by Professor S. De Sanctis of Rome[1]; but

[1] See *"Psychological Research in Childish Drawing"* of Prof. S. De Sanctis, in *Rivista d'Italia.* An. IV, vol. I, pages 49 and 311.

which continues to perfect itself little by little until it assumes a real plasticity of form. An American deaf graduate might perhaps not know how to draw one of the usual designs of the academic course, at which our pupils remain, but he is always able to express his thought with a few lines quickly traced, and to represent an object or a machine. Besides this, the eye and hand have been so exercised as to be able to give idea with drawing of the work of the trade to which every pupil dedicates himself.

Writing is cultivated together with drawing, and they prefer the perpendicular style of writing, to the great advantage of the training of the eye. Thus every pupil is always capable of utilizing any limited space on the page or slate, writing clearly in any position, even the most uncomfortable in which he finds himself.

In all the lessons of every branch they make use of polygraph copies with great economy of time and of errors, which would be inevitable if the text were copied by the pupils.

The exercise of individual reading is a great aid to the increase of knowledge and for the mutual correction of tasks. These are made on slates or writing tablets, so that they can be easily passed on from one pupil to another for observation and correction.

Thus it happens that the famous diaries, which in the copy-books of our pupils resemble each other in a monotonous repetition of stereotyped sentences, assume a great variety in the papers of the American Deaf. I have noticed many times that, instead of the well-known form of expression: *I made; I saw; I went,* etc., they have substituted these: *I read; they told me; I have thought; I saw in the writings of . . . Such a one said to me: I would like to do this; I doubt if,* and similar sentences. In these diaries are found references to what they have read in books and newspapers, and allusions to subjects to which the teacher had never paid the least attention.

In the work-shops, the deaf pupil finds registered on a slate, not only a list of words relating to the trade he is to learn, but he also sees, day by day, the operations explained which he must do. The teacher of the trade who, for reasons given elsewhere, can never be an illiterate person, gives the little workmen all the explanations necessary for directing their tasks in the workshop, insisting that they themselves must describe the order and manner

in which the various operations are done. Here there is no question of methods. Or, we have to do with an oral school, and then the teacher speaks to the pupils just as a school-teacher would do; or, we have to do with schools of the combined system, and then the manual alphabet and writing serve the object. In each case, however, the written form is used, and from it the pupil learns gradually the names of the tools, instruments, machines, and of the first materials used, of the work executed or to be executed, as well as the linguistic form used in orders for work and in all the phases of the execution of the same. It is not possible to say how much this system helps in instructing the pupils, for it supplies, as one may easily comprehend, the opportunities which are lacking to the school-teacher, and thus is derived that special culture, which afterwards in practical life is the most useful part of the instruction received.

§ 5. Aural Teaching.

In the Chapter on the methods used in teaching the Deaf in the United States, I have also referred to Aural teaching. It is necessary now to return to this subject in order to say something about its practical application.

As I have spoken many times on this subject during the past six or more years, I shall perhaps only repeat myself, and this I do not wish to do.

I am, therefore, very glad to give the words of Dr. Currier, of New York, who, by the repeated experiments he has made in his great institute, is the one among the American colleagues who can speak with most authority on this subject. This he did at the Congress of American Instructors of the Deaf at Buffalo (July, 1901). For the sake of brevity, I will condense here what he said on that occasion:[1]

"The results of the present aural teaching has confirmed the experiences of Menière, Wilde, and Morell.

"The conclusion which these investigators of the hearing power of the Deaf came to was this: Partial or very recent deafness may be alleviated, profound deafness is beyond the reach of aid except by miracle.

"As to Therapeutics and surgical operations, there is not much to hope for either, because, generally, one has to do with the

[1] Of the novelties which came later, among which the last and most sensational *Acousticon* does not modify in the least the conclusions referred to here, I can add that information which I received on the subject authorizes me to assure the colleagues of Italy that we have to do simply with an *industrial advertisement.*

paralysis of the auditory nerve, whose obstinacy led Itard to exclaim in despair, 'The ear is dead, and medical means have no effect on the dead.'

"The institute of New York (directed by Dr. Currier) will have a fine page in the history of Aural teaching. From the very opening of the institute in 1818, Dr. Akerly was able to demonstrate to a special committee of that institute that the experiments used for awakening the hearing power in some deaf pupils, if they did not really succeed in giving the ear the power of hearing the different sounds of speech, they might, however, gradually accustom the ear to know and estimate the sounds and vibrations it received.

"The experience of Dr. Akerly served to demonstrate another and very important thing, which is, that aural teaching without the oral, ends in being a useless and injurious loss of time.

"The experiments begun by Dr. Akerly suffered an interruption of about ten years, until Dr. Peet observed that the experiments made were such as to justify the introduction of articulation as a branch of instruction in the institution. When Dr. Day returned from his travels in Europe, the question of aural teaching was again placed in discussion. In the biennial reports of 1846, 1848, and 1852, one reads special reports of the acoustic condition of the Deaf of New York. It seems, however, that the study of the question was principally theoretic, until Dr. Orrick Metcalf, with the use of ear-trumpets, succeeded in giving a more human voice to some of the pupils in the articulation class."

Afterwards came the turn of the inventors of special instruments. The series of these inventions is such that it would, perhaps, be difficult to give them without some omissions, so I willingly dispense with doing it. But anyway, the Italian colleagues are now well informed of the many surprises which have come to us during the last twenty years from the other side of the Atlantic in regard to the abolition of deafness.

Dr. Currier undertook anew the studies and experiments of his predecessors on this subject, and he was confirmed in his conviction that there are cases of latent hearing power which can be awakened by the simple use of the noted ear trumpet with flexible tube. He ascertained, in consequence, that the capacity of certain deaf-mutes to recognize vocal sounds, and by visual comparison monosyllabic words and short sentences, stands in relation with the pupil's knowledge of language. Hence, it is neces-

sary that the pupil be first instructed in language and makes use always of speech-reading.[1]

To Dr. Currier, who expounded these ideas at the Convention of Buffalo, replied briefly Dr. Keiser, the consulting specialist of the Institute of Le Couteulx. It gives me pleasure to quote again his conclusion, which was as follows: "In the cases," he said, "in which the use of instruments can give some appreciable effect, this can be also obtained probably with the simple exercises of Phonation."

I cannot do otherwise than to subscribe to this conclusion which is precisely the same which I reached after repeated experiences and from the comparative observations I was able to make in the past.

Here I will only add, that my opinion is also based upon the conviction that there is no instrument nor exercise which can substitute the quantity, quality, and variety of tones and semitones which nature has placed in the *vocal pipes of man.*

Another word, however, I must add to what I have said elsewhere (Chap. XI) on the musical tendencies of some of my American colleagues, tendencies which are renewing, here and there, the noted experiments of our Provolo and of Rota, of Trieste. In Boston I had the opportunity several times of being present at the lessons of Mrs. Sarah Jordan Monro, who has the special work of cultivating the voices of the pupils in all the classes of the day-school directed by the capable and energetic Miss Sarah Fuller. This exercise starts with the simplest positions of the vocal organs for the exact production of isolated sounds and continues until the choral song, of whose quality and style I have already spoken.

The pupils of the higher classes gathered around a grand piano, and with their hands placed upon its surface with the object of following tactile vibrations, recite in a loud, recitative tone, verses and hymns, which they have learned by heart, according to a special instruction in the accentuation of the words and sentences. For this end Mrs. Monro has put into use every kind of graphic means for representing with figures and signs the phonetic elements of speech, and she obtains very satisfactory results . . . with those pupils who have some trace of hearing,

[1] To prevent mistakes I must note the fact that this is precisely the idea of Dr. Urbantschitsch, of Vienna, in regard to Aural teaching in schools for the Deaf.

and also with those who, although they do not actually hear, still can recall with this exercise the acoustic images of speech.

As to the totally deaf, I have observed always that they do not follow the musical exercise with delight, or else in following it they constitute the negative portion of the chorus, furnishing to the whole, especially when raising their voices, some false notes, out of tune and rythm. But, notwithstanding, I think that even in this case one may invoke a physiological law, which is, that the centres which can be developed give, with the exercise, a reflex advantage to those which cannot be developed.

But let us hear from the teacher of Boston herself, the reasons and the object of the exercise. I will sum up briefly an article which she published the years before my arrival in America, in the American Annals (March, 1901).

She speaks, in the first place, of the necessity, on the part of the teacher of the Deaf, of studying particularly the mechanism of speech, with the object of knowing the reciprocal influence which all the parts of the body have in relation to the act of phonation. She then notices the tendency of many persons to follow sources in declamation in order to acquire a just and gradual emission of the voice. She believes that the whole attention of him who wishes to speak well must be directed to the action of the diaphragm, which alone is active in the normal emission of the voice, while the vocal chords are and remain an entirely passive organ. Hence, the necessity of withdrawing the attention of the deaf child from his throat, so that he may acquire the sense of the free passage of the air through the larynx and of the impelling stimulus of the voice. It is only with these conditions, she said, that one obtains a good, regular respiration and the just moderation in using the breath in the act of speaking. It is true that the voice is the direct result of the vibrations of the vocal chords, but it is not wise, for the reason given, to call the attention of the deaf pupil to them. The conscious effort of the larynx leads always to an exaggeration. And one may hold as certain and sure that the most disagreeable qualities of the speech of the Deaf have their origin in the mistaken idea of the too zealous teachers of articulation, who take care to operate about the throat of the pupil.[1] That this is an error

[1] This mistaken treatment reminds one of what the eminent Principal of the Institute of Frankfort teaches us on the same subject in his lecture: *"How to teach the Deaf to speak* WELL." (See the translation from German of Prof. Fornari, in "Rassegna di Pedagogia e Igiene," Anno I; or that of G. Ferreri, in pamphlet, Siena, 1889.)

is also seen from the fact that none of the best teachers of the speaking and singing voice direct the attention of the pupil to the action of the vocal chords, but instead every one adopts every means possible to excite the vibration indirectly.

Mrs. Monro was induced by these considerations to demand of the piano a guide for the cultivation of the voice and the speech of her deaf pupils. She has observed that the Deaf have different manners of reaction to describe the various tactile sensations which they receive from the surface of the piano, but they all agree in distinguishing the length of the vibrations, the volume, and even the height and depth of the tones. They can also perceive the difference between the tones produced by a delicate touch and those resulting from a strong, energetic stroke.

As is seen, this is nothing more nor less than a return to the theories and practice of the Abbot Provolo di Verona. It may be that these exercises have a good effect on the final result of the teaching of speech. In fact, they are founded on a scientific principle, which is that of the multiplicity of the stimulus and their reciprocal association. The physiological aphorism, which is accepted by scientific Pedagogy, might perhaps apply to our case, that "the function makes the organ," or, in other words, "exercise creates the organ, or developes it by adapting it."

But, if I may express my opinion, I cannot disguise the fact that also in the Boston school (as in many others, especially the private ones, where they have great faith in Aural exercises), I have found the same defects in the color of the voice, and the same differences between the congenital Deaf and those of acquired and precocious deafness; defects and differences which we lament and which we have verified long since in the speech of our pupils.

It is necessary, therefore, to renew and perfect the experiments; and this Mrs. Monro wishes and hopes to do.

It is well to remember, however, that in order to do this, two conditions are necessary, which perhaps are not to be found in our schools:

First, teachers well prepared.

Second, greater time disposable for special exercises without causing a diminution in time and energy for the instruction of language.

The American schools are generally in these happy conditions, as has been shown many times in the various chapters of these notes.

(To be continued.)

THE REAL ROMANCE OF THE TELEPHONE, OR WHY DEAF CHILDREN IN AMERICA NEED NO LONGR BE DUMB.[1]

By Fred De Land.

CHAPTER XV.

Deaf, but no Longer Dumb.

Lewis Joel Dudley was born on a typical New England farm in—but distant from the centre of—the town of Guilford, Connecticut, on November 11, 1815. Like many another country lad whose childhood days were passed nearly a century ago, he could not be spared from the farm in summer, yet gladly attended the district school in winter. It is written that "the main element in his early environment was religion, and religion of the type then prevalent." Love and gentleness were overshadowed by fear and wrath; all were born in sin and iniquity and only a few would be saved from the awful terrors of eternal punishment. But the kindly, wholesome, and unselfish nature of the lad sought a less cruel religion, and, in later years, found one in which dogma and creed were displaced by loving helpfulness and good works.

At the age of seventeen he entered Guilford Academy, and two years later was admitted to Yale. In 1878, his class (1838) biographer wrote: "His inadequate preparation, especially in mathematics, his ignorance of the laws of health and of the physical conditions requisite for vigorous application, and his fear of disappointing the expectations of friends and former associates, detracted greatly from the pleasure and profit of his college course. He probably spent more time over books and studied with less vigor than almost any of his classmates. His present feeling is that he never learned how to study till after he left college. In the summer of his junior year a protracted sickness came near being fatal. After graduation he taught in the Lewis Academy in Southington, Conn., for one year; in the Brainard Academy in Haddam, Conn., the next year; and, in 1840, became a tutor at Yale. He instructed in Latin the first year, and

[1] Commenced in the October, 1905, number.

in Greek the five years following. He introduced some new features into the mode of conducting Greek recitations, which proved highly agreeable and beneficial to his pupils." Prof. James Hadley subsequently certified regarding them: "It is not too much to say that his services have been of permanent value to the college in elevating the standard of instruction in the Greek department." (Prof. Hadley also wrote that Mr. Dudley "was distinguished, as a teacher, for his energy and thoroughness; and was remarkably successful in awakening the interest and arousing the emulation of his pupils.")

"Leaving the tutorship in 1846, he spent the next year in the Yale Law School, and having previously attended the lectures, received the degree of Bachelor of Laws in 1847. He passed the following year in the law office of Messrs. Hungerford & Cone, at Hartford, and was admitted to the bar in 1848. Disliking the law 'pleadings' as then conducted, and feeling uncertain of success as a lawyer, but quite assured of success as a teacher, he opened, in 1849, at the suggestion of a high official at Yale, a classical school at Northampton, Mass., to prepare pupils for college. This school was a success, and continued to flourish fourteen years, having pupils from almost every state in the Union. It was suspended in 1862, for reasons growing out of the Civil War. Then he devoted his energies to the enlistment of Northampton's quota of soldiers and to their comfort in the field; was sent to the Massachusetts Senate in 1864, and made a member of the State Valuation Committee of the same year; was a member of the Massachusetts House of Representatives in 1865-6-7, and in 1873."

In 1883, Mr. Dudley was elected to the presidency of Clarke School and held that office until his death. For many years he had suffered from bronchial trouble, and, following a severe attack of asthma, he passed away at 6.30 A. M., Thursday, February 27, 1896, leaving his daughter Theresa, and his widow, Theresa Hunt Bates, to whom he was married on May 7, 1851, to mourn his loss. Mrs. Dudley was a daughter of the late Isaac C. Bates, United States Senator from Massachusetts. She died on March 9, 1901.

An intimate friend who thoroughly appreciated and valued Mr. Dudley's intellectual attainments, has described him "as a man of the old school, liberal in many ways but still he clung to the teachings and example of his Puritan ancestors. The domi-

nant principle of his life was thoroughness. Never anything was half-way accomplished by him." And Mr. Hubbard said: "From 1883 until his death he was more conservative than I was, and we often differed as to the best policy to be pursued; when his reason was convinced, he was always ready to yield,—one of the hardest tasks for a man of his character; but these differences never affected our confidence in each other, nor our trust and love."

Referring to the organization of Clarke School, Mr. Hubbard said, "The charter was obtained, a meeting of the Corporators was called, and the question was asked, 'What system should be adopted?' It was Mr. Dudley, I think, who proposed that Miss Rogers should be invited with her little school, to form the nucleus of the Clarke Institution. She came—a school was opened in the Gothic Seminary where Mr. Dudley had taught and lived so many years. I doubt if ever a day passed while the school was in his house, that Mr. Dudley did not visit the school and give to Miss Rogers and the other teachers the help of his wise counsel and sympathy. When the school was removed from his home to Round Hill, he continued his watchful care.

"He was chairman of our school committee from its organization until his death, and a more devoted friend and officer could not have been found, until failing years, loss of hearing and of sight, with declining health forbade his frequent attendance at the school. Even then his advice was given whenever desired, and Miss Yale, during the many years of her connection with the school, has received from him the same encouragement and help that was given to Miss Rogers."

It is interesting to add that from the day he made his memorable impassioned plea before the legislature for the passage of an act incorporating the Clarke Institution, until his death in 1896, Mr. Dudley did all in his power to advance its best interests and to aid Miss Rogers in every way, while during the last fourteen years of his life, 1883-1896, he acceptably served as its president. He forcibly urged the State to cease discriminating against the parents of the deaf and the blind, in the matter of education, after professing a policy of free schooling to all children, especially urging that deaf children should be educated in the school preferred by the parents, with "no distinction on account of the wealth or poverty of the parents or guardians of such children." He strove to have the word "dumb" stricken from all official documents and literature that applied to intelligent beings capable

of being taught speech, contending that "the sooner all phraseology which has so long served to broaden, deepen and intensify demarcation between hearing and deaf pupils, is discarded, the better it will be for the latter class." And he showed how the best lexicography had declared that the word "dumb" is properly applied only to creatures which do not possess the organs of articulate speech. To apply to the deaf child an epithet which expresses the most universal characteristic of the brute creation, is to keep alive in the public mind debasing and disparaging associations." And through his efforts "her deaf children now figure in official phraseology simply as Massachusetts pupils."

At the fourth conference of principals and superintendents, held in May, 1880, Mr. Dudley explained how the word *dumb* "is fraught with painful associations to every sensitive mind, is disparaging to the deaf, and humiliating to them and their kindred. In all cases where the word 'deaf' will not suffice, let us use the expression, 'deaf-mute,' which is more accurate, more philosophical and more humane. When we would distinguish brutes from ourselves, and especially when we would emphasize the distinguishing mark of their inferiority, we call them 'dumb brutes.' When the apostle, Peter, would emphasize the infatuation of Balaam, it was not enough for him to say, 'an ass forbade the madness of the prophet,' but he must needs say it was a 'dumb ass.' When the prophet, Isaiah, would fitly characterize the greedy and faithless religious teachers of his day, it was not enough for him to call them 'dogs,' but he must call them 'dumb dogs.' When Mr. Longfellow would exhort us to aim at something higher than mere animal existence, it does not suffice for him to speak of 'cattle,' and 'driven cattle,' but it is 'dumb, driven cattle that we should not be like.'"

Referring to the earliest records of the treatment of the deaf, Mr. Dudley said: ".... So it happened that to the Greeks and Romans, and to our Saxon ancestors, ignorant of physiology, the absence of speech indicated the absence of reason. As the deaf-born were always speechless, they were always supposed lacking intellect, mentally imbecile, half idiotic; and that is just what the old Saxon word, *dumb*, originally meant, and just why it was applied to the deaf. More than this: As the speechlessness *alias* mental imbecility, was not known to be caused by the deafness, but was supposed a separate and additional infirmity, the deaf-born were supposed subject to a double curse. Hence we

have the copulative, *and*, as well as the epithet *dumb*—deaf *and* dumb; deaf *and* stupid, deaf *and* brutish! The times of that ignorance we must needs wink at, but now that we know better, why perpetuate this barbarism? Why not discard and discountenance this old-fashioned, mistaken, cruel phraseology?"

Again, in his annual report for the year ending August 31, 1884, President Dudley, in referring to the "coarse and cruel designation" of *dumb*, wrote: "It may be said that this word in its human application, is too strongly intrenched in our vernacular to be displaced. But this is not self-evident. Language is not a stereotyped thing. A multitude of words which were current in Shakespeare's time, have become obsolete or been radically changed in their significance and application. A revision of our English version of the Scriptures was called for largely by this fact. Simply ceasing to use a word in a given application will render it obsolete in that application. It is the prerogative of every profession and guild to dictate the terminology of its own subject matter. There is need only of a beginning in the right quarter. Let the word *dumb* be stricken from the title-page of the only periodical of character in this country devoted to the interests of the deaf, and let it be expunged from the corporate name of every deaf-mute institution in the land, and the work will be already half done. This change of name can be accomplished by means no more expensive or onerous than a simple legislative resolve of two or three lines; possibly, in some cases, without even this formality. Then let all instructors and special friends of these unfortunates, blot the word in its human application from their vocabulary, use instead 'deaf-mute' or 'deaf,' and the change will soon find its own way into periodicals, newspapers and popular speech.

"This is a matter quite independent and outside of all agreements as to the best system of instruction. Those who teach the deaf to speak, demonstrate the impropriety of the current terminology, and almost unconsciously cease to use it. Those who still think the manual method best for a majority of the deaf, *cannot afford* to perpetuate this terminology. To do so, will certainly operate to their disadvantage. The public mind is becoming thoughtful, inquisitive, sensitive with respect to everything pertaining to humanity, and is likely, at no distant day, to regard with disfavor any system of instruction with which the *use* of the obnoxious epithet 'dumb' applied to human beings, shall become exclusively identified.

"It is earnestly to be hoped that *all* teachers of the deaf, of whatever persuasion as to systems, will cordially co-operate in effecting a change *to which not the slightest valid objection is apparent*, and that none will longer, unconsciously and needlessly counteract in any degree by their language, the high and benevolent intent of their labors—the elevation and well-being of an unfortunate class."

Thus it is gratifying to know that Mr. Dudley's last days on earth were enriched by the message that his earnest efforts, covering a period of three years, to have the name of the Clarke Institution for Deaf-Mutes changed to the Clarke School for the Deaf, had resulted in the passage of an act by the Legislature, on February 12, 1896. It should also be a source of gratification to all friends of deaf children, that of one hundred and thirty-seven schools or institutions for the deaf in the United States, only nineteen now have the word "dumb" incorporated in the official title.

Yet, notwithstanding this remarkable progress, it is a source of regret that the legislatures of the great commonwealths of Illinois, Indiana, Ohio, Pennsylvania and New York, to say nothing of other States, have failed "to blot the word 'dumb' in its human application" from the official designation of institutions designed for the education of children whose vocal organs are unimpaired.

CHAPTER XVI.

One of the Concord Group.

Franklin Benjamin Sanborn, who, in 1877, succeeded Mr. Hubbard as president of Clarke School, was born on a farm at Hampton Falls, New Hampshire, on December 15, 1831. He attended Phillips Exeter Academy; entered Harvard in 1852, graduating in 1855. In March of that year he moved to Concord, Massachusetts, and since that date has maintained a residence in that historic town, though in the intervening years he has visited many countries.

All his life Mr. Sanborn has been a teacher; a practical agitator who maketh good. For eight years he was the headmaster of a flourishing school which he founded in Concord. It is of record that he "was the most genial and goodhumored of schoolmasters." But since 1856, Mr. Sanborn has been a teacher of the

Republic: his pupils, the thoughtful men and women of the Nation, who earnestly desired to help the oppressed and the defective. The practical, helpful character of Mr. Sanborn's pioneer philanthropic work has won for him a well-merited reputation.

On his arrival in Concord, through the kindness of Emerson, Mr. Sanborn secured three rooms for himself and sister, in the home of Ellery Channing, while they dined at the home of Thoreau's mother, just across the street. Thus it came about that Emerson, Thoreau, Channing, Bronson Alcott, and Sanborn grew to know each other intimately. And, it may be added, that during the last ten years of his life Ellery Channing resided in the home of Mr. Sanborn, in Concord, and died there in December, 1901.

In 1885, Concord had a population of less than twenty-five hundred, and only one wealthy resident. Yet Mr. Sanborn gave $100 and the town raised $900 more at the first meeting held to help the brave men and women who were striving to keep Kansas a free State. Then Mr. Sanborn visited Illinois, Iowa, and Nebraska, in aid of the Free State movement. On February 18, 1857, he introduced John Brown to the Massachusetts Legislature, as the sixth descendant of Peter Browne, of the Mayflower, stated that Captain Brown had been to Kansas what Miles Standish was to the Plymouth Colony, and added: "This man whom all Massachusetts rises up to honor, is today an outlaw in Kansas." Mr. Sanborn took John Brown to Concord, and introduced him to Thoreau, and Emerson came in and invited the Kansas hero to remain with him overnight, and they spent much of the night talking about conditions in Kansas. In 1859, John Brown again visited the home of Sanborn, who, in 1858, had unsuccessfully endeavored to dissuade him from making the Virginia foray. But all this is better told in the writings of others. Suffice it to say that Sanborn's brave sister, Sarah, gave watchful care to John Brown's daughters while they attended her brother's school.

In September, 1863, Mr. Sanborn was appointed secretary and became a member of the executive committee of the Board of State Charities of Massachusetts, the first State board of charities organized in America. Ten years later he aided in the organization of the National Conference of Charities and Correction, in which he has since been a prominent leader. Mr. Sanborn was also one of the original incorporators of the National Prison Association, in 1871.

In 1865, Mr. Sanborn was associated with Dr. Samuel Gridley Howe and others, in the organization of the American Social Science Association, and acceptably served as its secretary for thirty-two years. In 1879, with Bronson Alcott and W. T. Harris, he opened the Concord School of Philosophy.

During the years 1863-1868, Mr. Sanborn edited the weekly *Boston Commonwealth*, a strenuous advocate of emancipation. In 1868, he became an editor of the *Springfield Republican*, and helped to make it one of the most influential daily papers in the country.

Mr. Sanborn was a strong and efficient colaborer in the Gardiner Greene Hubbard movement of 1864-1867, in behalf of deaf children. With Dr. Howe, he perceived the fallacy of classing as a charitable act, the education of *any* of the children of the Commonwealth. Dr. Samuel G. Howe was chairman, and Mr. Sanborn, secretary of the Board of State Charities, and in their annual report for 1865, they sketched "the outlines of a plan by which the deaf-mute children of Massachusetts, who, if taught at all, are now sent to an adjoining State, can be kept at home, and instructed by methods equally good, and, perhaps, superior."

The gentlemen again called attention to this important subject in the annual report for 1866, and stated that there were "three considerations which should have great weight in deciding this question:

"First, these unfortunates are, for the time, wards of the Commonwealth; and, other things being equal, she should commit them to the charge of her own citizens rather than to others; she should keep them at home rather than send them abroad. In the words of the Governor, 'As ours is the responsibility, be ours, also, the grateful labor. To no other object of philanthropy will the warm heart of Massachusetts respond more promptly.' It is well known to those conversant with the subject, that great and important changes in the mode of instructing mutes have been earnestly advocated by some of the ablest teachers in Europe, and that the Governments of France and of Russia have taken measures to test the value of these by actual practice. Massachusetts may become ever so well convinced that these changes are desirable, but she has no power at present to try them in practice, for she has no right to prescribe the method of instruction at the Asylum in Hartford.

"Second, any undue aggregation of persons suffering a com-

mon infirmity is unwise, because while it intensifies the unfavorable peculiarities growing out of their infirmity, it lessens the corrective influence of associating with ordinary persons. Schools, therefore, for the infirm or defective, especially boarding schools, should be no larger than is necessary. This principle can hardly be insisted upon too strongly. Massachusetts now sends a hundred mute children to the Hartford Asylum, and if the school were nearer the centre of our population, the number would probably reach a hundred and fifty, which is even more than is necessary for all purposes of classification. This subject was fully discussed in our last year's Report, and it is hardly necessary for us to say here, that we do not desire to build up a large and costly institution for the deaf-mutes of Massachusetts, but to see them distributed in several schools, to which pupils younger than are now received at Hartford could be sent.

"Third, the chief end of the special instruction of mutes is to teach language, from learning which, in the ordinary way, they are precluded by their infirmity. Now, like other children, they are best adapted for this during the tender years of early childhood. Every year after a certain age, which is quickly reached, the facility for learning language lessens. But the reluctance of parents to send mutes from home during childhood is very great, and their reluctance naturally increases in proportion to the distance of the school.

"If, as has been suggested, there were several small schools for such children in different parts of the State, and one central finishing school, in which the higher branches of learning and the trades could be taught, it might meet the wants of this interesting class in the best manner, with least interruption of those family and social relations which are even more important for them than for ordinary children."

During the meetings held by the joint legislative committee, in 1867, as already explained in earlier chapters, Mr. Sanborn told of a pleasant visit he had had with Mabel Hubbard, at her father's residence, how he had "asked questions in geography, and heard her recite poetry, and she also asked questions; and I believe we answered the questions to our mutual satisfaction." He told of his visit to Miss Rogers' school at Chelmsford, of the progress the pupils were making, especially two who were born deaf, and compared their progress with pupils in Hartford. He gave an historical resumé of early efforts to educate the deaf, of

Pereire's school in Paris, in 1750, of Braidwood's school, of the efforts of Francis Green, of Dr. Blanchet's school, and of the early age at which the education of deaf children should commence. Then he advocated day-schools for the deaf, presented statistics showing the probable "number of deaf-mute children living in cities and thickly-settled localities, who might attend such schools in case they were established," and added: "I do not think we have information enough to enable us to say that the experiment would certainly succeed; but I think the State should put herself in a position to try that experiment, which I am convinced, is the very pivot of the whole matter of instructing deaf-mutes."

Speaking of the oral method, Mr. Sanborn said: "Without entering into the question whether that method is correct, or to how many children it is applicable, I maintain that children who have lost their hearing, but who retain the faculty of speech, should at once, without the loss of a day, if possible, have that faculty cultivated and improved; and I am prepared, if necessary, to show that that mode of teaching by which the faculty of speech is retained and improved, is very much neglected at Hartford and in almost every institution for the instruction of deaf-mutes in this country."

Mr. Sanborn's testimony before the Legislative committee covers a total of more than twenty-six pages, yet to his lasting honor be it recorded, that only once did he use the word "dumb," when referring to the deaf, save in quoting from the writings or statements of others. "The deaf" or "deaf-mutes" were his invariable expressions.

Early in 1868, Mr. Sanborn became a corporator of Clarke School, being elected to the vacancy created by the retirement of a member of the board, an office he still holds. In 1877, Mr. Sanborn was elected to the presidency to succeed Mr. Hubbard, and efficiently discharged the duties of that office for five years. Mr. Sanborn's clear conception of the value of speech to the deaf child, is forcibly shown in his annual reports, as president of Clarke School, to the State Board of Education. In 1878, he wrote:

"The (deaf) pupils who acquire a knowledge of the higher branches must be comparatively few, (as they are in our public schools), while, from the difficulties which deafness creates, the time spent in learning the elementary branches is generally pro-

longed. If, in addition to these, the deaf pupil shows some dullness or eccentricity of mind, as not unfrequently happens, his progress in learning is still more delayed, and a point may be reached beyond which he cannot easily go. Add to this, again, the fact that the same disease or defective condition of health, which first caused the deafness, may continue to affect the vigor of the child, and it will readily be seen that the teacher of deaf children has to contend against many obstacles which hardly show themselves in the instruction of those who can hear. To overcome these, the Corporation has endeavored to secure teachers who have a special fitness for our method of instruction, and in this we have been so far successful that the results at the Clarke Institution have been useful and encouraging in a high degree. Were this simply our own opinion we might hesitate to express it with entire confidence; but it is confirmed, as we understand, by the judgment of the Board of Education, which supervises all the schools of Massachusetts, and by that of other impartial persons from many states and countries, who have visited and inspected our schools. A difference of opinion still exists as to the extent to which the teaching of articulation and by articulation ought to be carried in particular cases; but all who understand our methods and results are agreed, that much useful instruction is given here where the only teaching is by articulation, and where but one-third of the whole number received have been either semi-deaf or semi-mute. Practically a majority of them are congenital mutes, who here acquire and retain articulation and are made independent of the sign language in their whole education. In order to do this it is important that the instruction of our pupils should begin early and should be carried on as methodically, and with as many advantages as possible."

In 1879, his report contains this statement:

"How valuable this instruction has been to those pupils who have left the Clarke School, either by graduation or before completing their course, will appear in part, from the letters quoted and the statements made in the report of Miss Rogers concerning the experience of pupils after leaving school. It will be seen, for example, that not only those who were regarded here as proficient pupils, but several others, have made their way in the world by virtue of what they learned at the Clarke Institution. It is often thought and sometimes said that our mode of instruction is a costly luxury—well enough for the rich and the in-

telligent, but not so well adapted to the poor or dull children. We find, on the contrary, that, just as it is the poor who need it most, so they profit most by it. Being restored to society in some degree by the power of speech and lip-reading acquired here, pupils of this class are more ready to support themselves by diligent labor than those who can only use the sign language; while to those who have gone on well in their studies, a wider range of occupation is opened than the deaf-mute taught by signs can enter upon. This, at all events, is our belief, and the facts stated by the Principal seem to confirm it."

In his interesting address on "The Instruction of the Deaf in America," delivered at the twenty-fifth anniversary of the opening of the Clarke School, October 12, 1892, Mr. Sanborn cited many facts of historical value in connection with the movement that culminated in the successful introduction of oral teaching here in America.

In his characteristic address, welcoming to Clarke School the members of the American Association to Promote the Teaching of Speech to the Deaf, in June, 1899, Mr. Sanborn said: "We welcome here, as we have always welcomed, those who take a different view of our branch of education from that which experience has taught us to follow. The accomplished and energetic instructors in the American schools that preceded ours were subjects of my admiration when I first began to inspect their schools, thirty-five years ago, and I never have lost that feeling of respect which such talent and zeal, even if misdirected in details, must ever inspire in the friends of mankind. They have learned to value, more highly than they then did, the methods which they had hardly known, or but doubtingly tried; and we have learned to recognize the difficulties which they fearlessly pointed out to us in our chosen path. We shall continue to differ, I suppose,—nor do I regret it,—in some of the details of instruction; but we can agree to differ, so long as we all keep in view the great purpose of all instruction."

(*To be continued.*)

SPECIAL REPORT UPON THE DEAF, BASED ON THE RETURNS OF THE TWELFTH CENSUS.[1]

PREPARED BY ALEXANDER GRAHAM BELL, AS EXPERT SPECIAL AGENT OF THE CENSUS OFFICE.

(*Continued from page 469, Vol. VIII.*)

Ability to read the lips.—Out of a total of 89,287 persons reported at the Twelfth Census as deaf, 14,474 could read the lips, 13,986 could not, and in 60,827 cases the ability to read the lips was not stated.

The large number of "not stated" cases is remarkable; but the reason becomes intelligible from an examination of Table XXI, in which the ability to read the lips is considered in connection with the period of life when deafness occurred, the degree of deafness, and the ability to speak.

The question relating to lip-reading (or "speech-reading," as it is more correctly termed) was very poorly answered by the partially deaf, and the majority of the answers were in the negative. Too few replies were received to warrant analysis, and the whole of the partially deaf were therefore tabulated as not answering the question. This accounts for the large number of "not stated" cases among the deaf from adult life, and among those who speak well, for the vast majority of those who speak well, or who became deaf in adult life, were partially deaf.

Table XXI is illustrated by Diagram 20.

So far as the census returns show, the power of speech-reading is confined to the totally deaf. This does not arise from any natural incapacity on the part of the partially deaf to acquire the art, but from artificial conditions which interfere with its acquisition.

A person who is only slightly deaf usually turns his head away from the person with whom he converses, to one side or the other, to favor his best ear, often placing his hand to his ear to increase the volume of sound.

[1] A reprint of "Special Reports: the Blind and the Deaf," in the part relating to the Deaf; issued by the Department of Commerce and Labor, Bureau of the Census, Washington, 1906. Commenced in the October, 1906, number of the REVIEW.

The turning away of the head, while it may not perhaps entirely prevent the possibility of speech-reading, is certainly not favorable to it, for the speech-reader must look at the speaker, so as to observe the movements of his mouth and the expression of his face.

TABLE XXI.—*The deaf, by ability to read lips, period of life when deafness occurred, degree of deafness, and ability to speak.*

PERIOD OF LIFE WHEN DEAFNESS OCCURRED, DEGREE OF DEAFNESS, AND ABILITY TO SPEAK	Total	ABILITY TO READ LIPS		
		Can read lips	Cannot read lips	Not stated
Total	89,287	14,474	13,986	60,827
When deafness occurred:				
Childhood (under 20)	50,296	12,755	13,211	24,330
Adult life (20 and over)	35,924	1,516	568	33,840
Unknown	3,067	203	207	2,657
Degree of deafness:				
Totally deaf	37,426	14,474	13,986	8,966
Partially deaf	51,861	.....	.....	51,861
Ability to speak:				
Well	55,501	5,140	817	49,544
Imperfectly	9,417	4,693	553	4,171
Not at all	24,369	4,641	12,616	7,112

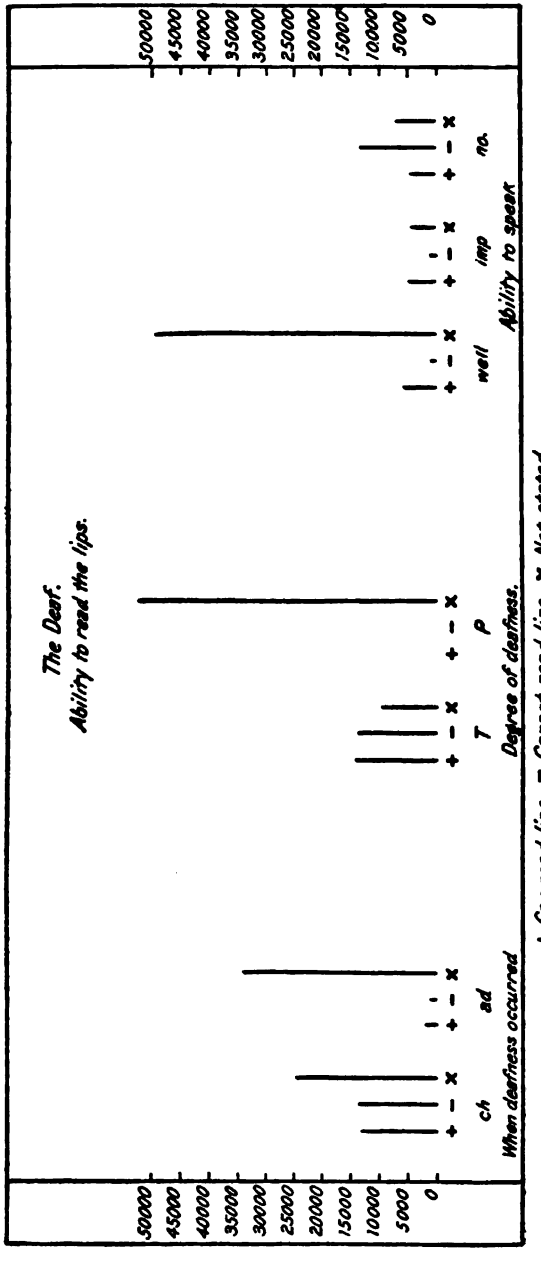
Many slightly deaf persons, however, do keep their eyes fixed upon the speaker's face, and in such cases it is probable that what they hear is unconsciously supplemented by something they see. They may not call this speech-reading or know anything consciously about the art, but they recognize the fact that they do not seem to hear so well with their eyes closed. Perhaps it might be more correct to say that they have less difficulty in understanding speech when they are watching the face of the speaker than when their eyes are closed. This means that sight undoubtedly aids them in comprehending what is said.

In cases of graver disability, where the degree of deafness is so great as to make it very difficult to carry on conversation by ear, the speaker's mouth is usually applied directly to the deaf person's ear, thus precluding entirely the possibility of speech-reading. It is probable that the partially deaf of the present census belong largely to this class.

Even when resort is had to artificial appliances to aid the hearing, the conditions are not favorable to speech-reading, for the mouth

of the speaker is apt to be concealed, in whole or in part, by the mouth-piece of the hearing tube into which he speaks.

DIAGRAM 20.



On the other hand, the totally deaf, though laboring under a greater natural disability than the partially deaf, are not hampered by these artificial hindrances to speech-reading. They do not turn their heads away from the speaker in order to hear better with one ear, for they do not hear at all. For the same reason words are never spoken into their ears. Artificial appliances, too, to aid the hearing never impede their view of the speaker's mouth, for they do not use them. They are free to rivet their whole attention upon the visible manifestations of utterance. It is not surprising, therefore, that some of them should have succeeded in acquiring a useful ability to read the lips, even without special instruction, by simple observation and persistent effort. It is only surprising that the partially deaf should not have been equally successful. Better equipped by nature, they are less efficient in this respect. Two senses used together, one supplementing the deficiencies of the other, would seem to be a better equipment for speech-reading than the one sense of sight alone; but the partially deaf as a class do not read the lips. The special difficulties in their way, however, are all artificial and not inherent in the nature of the case, and could therefore be removed.

Speech-reading is now taught in our special schools for the deaf, so that many of the deaf from childhood have had the opportunity of acquiring the art by instruction. Most of those, however, who lost hearing in adult life have not apparently yet learned of this important means of ameliorating their condition. They fly to hearing trumpets and speaking tubes for relief, but rarely think of "lip-reading" in this connection. Many of them have never even heard the word, or have associated lip-reading with the "deaf and dumb" rather than with themselves.

Failure to reply to the simple question whether the person could or could not read the lips can only be taken as an indication of ignorance as to what is meant by the term "lip-reading." This involves the further point that the persons who failed to reply were, as a matter of fact, unable to read the lips, for if they could do so they would have known the meaning of the question, and no apparent reason exists why they should not have answered it. It is hardly conceivable that several thousands of persons should have failed to answer "yes" or "no" to that particular question, while freely answering others, if they understood it.

We conclude, therefore, that they did not understand it, and that they could not read the lips. The answers should have been in the negative.

From Table XXI it appears that the total number of persons reported as able to read the lips was 14,474, all of whom were totally deaf. These constitute 39 per cent of the totally deaf and 16 per cent of the whole of the deaf.

Of these 14,474 cases, 12,755, or 88 per cent, were deaf from childhood, and 1,516, or 10 per cent, were deaf from adult life; 5,140, or 36 per cent, could speak well; 4,693, or 32 per cent, could speak imperfectly; and 4,641, or 32 per cent, could not speak at all. Roughly speaking, about one-third could speak well, one-third imfectly, and one-third not at all.

It is rather remarkable that 4,641 persons who could not speak at all should have been returned as able to read the lips. The explanation seems to lie in the fact that speech and speech-reading, though always taught together in schools for the deaf, are two separate and distinct arts, and pupils may succeed in one and fail in the other. Many good speakers are poor lip-readers and many good lip-readers are poor speakers. The persons referred to probably acquired their ability to read the lips by special instruction in school, in which case they were also taught speech; and, since they were returned as unable to speak, this means that they failed to profit by their speech instruction sufficiently to be included among those who speak imperfectly or well, while retaining a useful ability to understand the speech of others by watching the mouth.

In Table XXII the deaf are analyzed by their ability to read the lips, and by age when deafness occurred.

Table XXII is illustrated by Diagram 21.

From Table XXII it appears that very few of the deaf who can read the lips lost hearing in adult life (Diagram 21), and that most of them (62 per cent) became deaf in early childhood, before reaching the age of 5.

The deaf who can read the lips thus belong chiefly to the class totally deaf from early childhood (under 5), all of whom are naturally deaf and dumb.

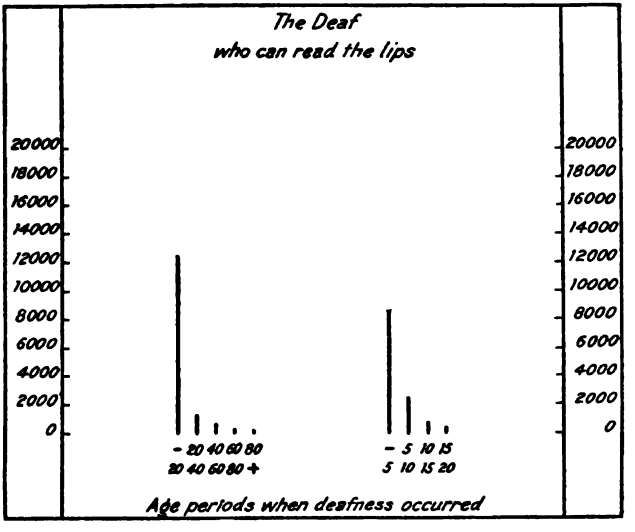
The strange anomaly is here presented, that those who are by nature the least qualified to read the lips (the deaf and dumb who are totally deaf) are most successful in acquiring the art; whereas those who are best qualified by nature (the partially deaf who speak well) are least successful.

The explanation lies in the fact that most of the partially deaf who speak well, became deaf in adult life and have not received any special instruction in lip-reading; whereas most of the deaf and

TABLE XXII.—*The deaf, by ability to read lips, and age when deafness occurred.*

AGE WHEN DEAFNESS OCCURRED	Total	ABILITY TO READ LIPS		
		Can read lips	Cannot read lips	Not stated
All ages	89,287	14,474	13,986	60,827
Age when deafness occurred :				
Unknown.....	3,067	203	207	2,657
Indefinitely stated.....	4,630	389	392	3,849
Definitely stated	81,590	13,882	13,387	54,321
Indefinitely stated :				
Childhood (under 20).....	2,347	339	369	1,639
Adult life (20 and over).....	2,283	50	23	2,210
Definitely stated :				
Birth.....	14,474	3,535	5,802	5,137
After birth, under 2.....	7,396	2,147	2,645	2,604
2 and under five..... ...	10,536	2,877	3,261	4,398
Under 5	32,406	8,559	11,708	12,139
5 and under 10.....	7,018	2,333	814	3,871
10 and under 15.....	4,464	984	192	3,288
15 and under 20.....	4,061	540	128	3,393
Under 20	47,949	12,416	12,842	22,691
20 and under 40.....	16,588	1,081	282	15,225
40 and under 60.....	9,437	305	173	8,959
60 and under 80.....	6,595	73	78	6,444
80 and over.....	1,021	7	12	1,002

DIAGRAM 21.



dumb who are totally deaf, lost hearing in early childhood and were sent to special schools for the deaf, where they were taught speech-reading as a regular part of their curriculum. The difference is due to instruction.

Usual means of communication.—Table 1[1] shows the usual means of communication employed by the deaf. Four methods of communication are noted: Si (sign-language); fg (finger-spelling); sp (speech); and wr (writing).

Some of the deaf use one of these methods alone, others employ two or more, and still others, all of them. It therefore becomes advisable to classify the methods of communication employed, in order to study the combinations intelligently.

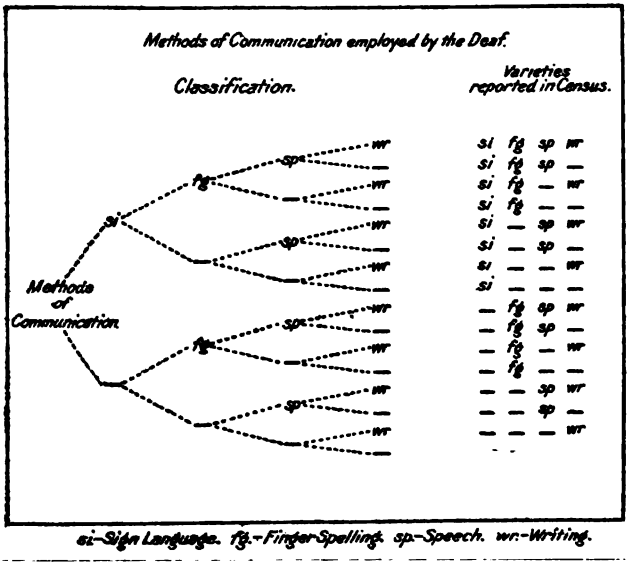
We may commence by dividing the deaf into two classes—those who employ the sign-language and those who do not.

Each of these classes may be divided into two broad groups (analogous to genera), viz, those who employ finger-spelling and those who do not.

Each of these broad groups may be divided into two subgroups (analogous to species), viz, those who employ speech and those who do not.

Each of these subgroups may be still further divided into two varieties, those who resort to writing and those who do not.

DIAGRAM 22.



[1] Of the General Tables. Omitted from this republication.

TABLE XXIII.— *The deaf, by degree of deafness, period of life when deafness occurred, and method of communication.*

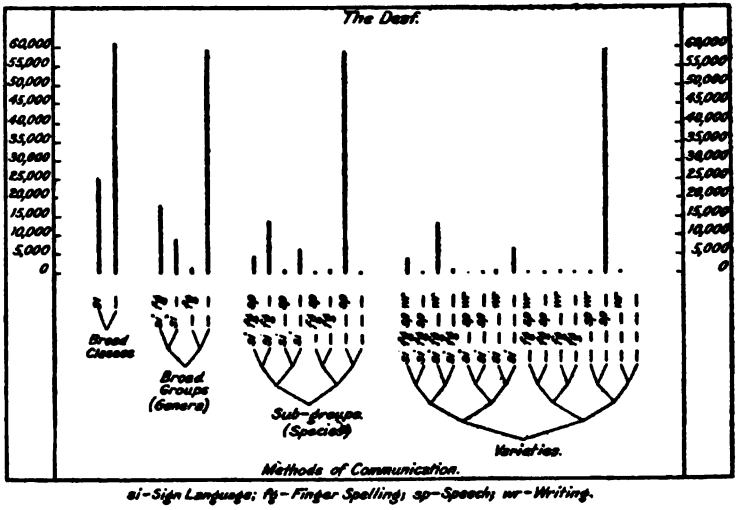
METHOD OF COMMUNICATION	Aggregate	PERIOD OF LIFE WHEN DEAFNESS OCCURRED									DEGREE OF DEAFNESS	
		Childhood (under 20)			Adult life (20 and over)			Unknown				
		Total	Totally deaf	Partially deaf	Total	Totally deaf	Partially deaf	Total	Totally deaf	Partially deaf	Totally deaf	Partially deaf
Total	89,287	50,296	33,148	17,148	35,924	3,483	32,441	3,067	795	2,272	37,426	51,861
Methods of communication :												
Not stated	2,652	2,416	2,184	232	63	34	29	173	147	26	2,365	287
Stated	86,635	47,880	30,964	16,916	35,861	3,449	32,412	2,894	648	2,246	35,061	51,574
Si	25,748	25,251	23,512	1,739	149	97	52	348	309	39	23,918	1,830
—	60,887	22,629	7,452	15,177	35,712	3,352	32,360	2,546	339	2,207	11,143	49,744
Si fg	18,087	17,880	16,891	989	24	21	3	183	170	13	17,082	1,005
Si —	7,661	7,371	6,621	750	125	76	49	165	139	26	6,836	825
— fg	1,483	1,437	1,347	90	24	18	6	22	19	3	1,384	99
— —	59,404	21,192	6,105	15,087	35,688	3,334	32,354	2,524	320	2,204	9,759	49,645
Si fg sp	4,254	4,216	3,455	761	10	7	3	28	20	8	3,482	772
Si fg —	13,833	13,664	13,436	228	14	14	.....	155	150	5	13,600	233
Si — sp	1,070	1,000	534	466	48	21	27	22	16	6	571	499
Si — —	6,591	6,371	6,087	284	77	55	22	143	123	20	6,265	326
— fg sp	436	416	346	70	13	12	1	7	5	2	363	73
— fg —	1,047	1,021	1,001	20	11	6	5	15	14	1	1,021	26
— — sp	59,158	20,977	5,900	15,077	35,674	3,324	32,350	2,507	304	2,203	9,528	49,630
— — —	246	215	205	10	14	10	4	17	16	1	231	15
Si fg sp wr	4,049	4,016	3,317	699	7	4	3	26	19	7	3,340	709
Si fg sp —	205	200	138	62	3	3	.....	2	1	1	142	63
Si fg — wr	12,826	12,674	12,470	204	12	12	.....	140	135	5	12,617	209
Si fg — —	1,007	990	966	24	2	2	.....	15	15	.....	983	24
Si — sp wr	195	185	140	45	7	6	1	3	1	2	147	48
Si — sp —	875	815	394	421	41	15	26	19	15	4	424	451
Si — — wr	371	358	350	8	6	4	2	7	7	.....	361	10
Si — — —	6,220	6,013	5,737	276	71	51	20	136	116	20	5,904	316
— fg sp wr	368	357	307	50	8	7	1	3	3	.....	317	51
— fg sp —	68	59	39	20	5	5	.....	4	2	2	46	22
— fg — wr	776	760	747	13	7	3	4	9	9	.....	759	17
— fg — —	271	261	254	7	4	3	1	6	5	1	262	9
— — sp wr	557	500	415	85	44	27	17	13	8	5	450	107
— — sp —	58,601	20,477	5,485	14,992	35,630	3,297	32,333	2,494	296	2,198	9,078	49,523
— — — wr	246	215	205	10	14	10	4	17	16	1	231	15
— — — —	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Diagram 22 exhibits the whole scheme of classification, after the manner of a genealogical chart, with the varieties reported in the census returns, arranged in accordance with the classification. Fifteen varieties are reported, and these include all the possible combinations of si, fg, sp, and wr.

Table XXIII shows the method of communication employed, by the period of life when deafness occurred and the degree of deafness.

The methods of communication shown in Table XXIII are illustrated by Diagram 23.

DIAGRAM 23.



Out of 89,287 deaf, the usual methods of communication are stated in 86,635 cases, and not stated in 2,652. The following percentages have been calculated upon the stated cases:

THE DEAF.

BROAD CLASSES.

Si.....29.7 per cent employ the sign-language.
— .....70.3 per cent do not.

BROAD GROUPS.

Si fg.... .....20.9 per cent employ both sign-language and finger-spelling.
Si —..... 8.8 per cent employ sign-language but not finger-spelling.
— fg..... 1.7 per cent employ finger-spelling but not sign language.
— —.....68.6 per cent employ neither sign-language nor finger-spelling.

PRINCIPAL SUBGROUPS.

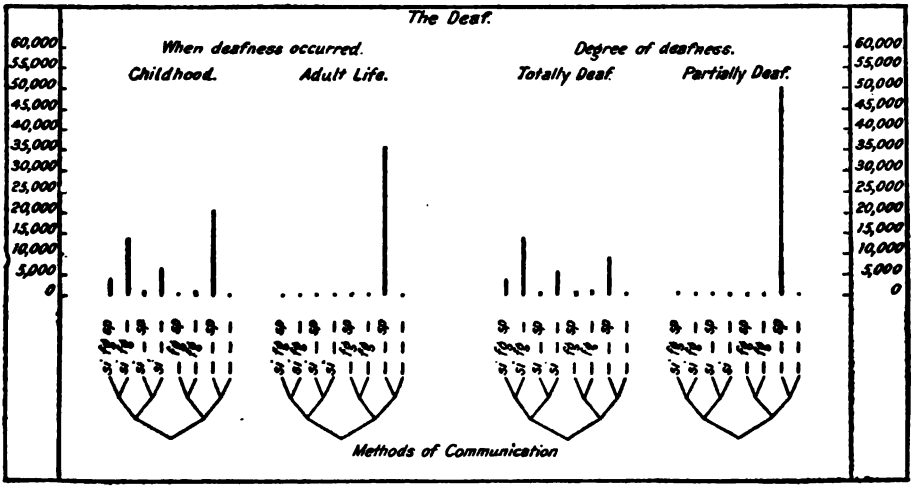
Si fg sp..... 4.9 per cent employ sign-language, finger-spelling, and speech.
Si fg —.....16.0 per cent employ si and fg but not sp.
Si — —..... 7.6 per cent employ si but not fg or sp.
— — sp .....68.3 per cent employ sp but not si or fg.
3.2 per cent employ other combinations of si, fg, and sp.

PRINCIPAL VARIETIES.

Si fg sp wr.. 4.7 per cent employ sign-language, finger-spelling, speech, and writing.
Si fg — wr..14.8 per cent employ si, fg, and wr but not sp.
Si — — —.. 7.2 per cent employ si but not fg, sp, or wr.
— — sp —..67.6 per cent employ sp but not si, fg, or wr.
5.7 per cent employ other varieties.

The total number employing the sign-language is 25,748, the total using finger-spelling is 19,570, the total using speech is 64,918, and the total who resort to writing is 19,388. Writing, although the clearest and most definite means of communication known to the deaf, is as a rule used only as a last resort, because it is, of all means known, the slowest and most laborious. We can not assume that those persons can not write who do not specify writing among the means they employ. This omission simply means that they can make themselves sufficiently understood by the other methods specified, and do not usually resort to writing as a means of communication.

DIAGRAM 24.



si-Sign Language; fg-Finger Spelling; sp-Speech.

Diagram 24 contrasts the usual means of communication employed by the deaf from childhood and deaf from adult life; and by the totally deaf and partially deaf, using "subgroups" as sufficiently detailed for the purposes of comparison.

This diagram shows that the deaf from adult life and the partially deaf employ substantially only one of the methods of communication known, viz, — — sp (speech without sign-language or finger-spelling).

Of the deaf from adult life, 99.5 per cent employ — — sp, and only 0.5 per cent employ other means.

Of the partially deaf, 96.2 per cent employ — — sp, and only 3.8 per cent employ other means.

The following percentages relate to the deaf from childhood (under 20) and are based upon 47,880 cases in which the usual means of communication are stated (Table XXIII).

THE DEAF FROM CHILDHOOD (UNDER 20).

BROAD CLASSES.

Si.....52.7 per cent employ the sign-language.
—.....47.3 per cent do not.

BROAD GROUPS.

Si fg.....37.3 per cent employ both sign-language and finger-spelling.
Si —.....15.4 per cent employ si but not fg.
— fg..... 3.0 per cent employ fg but not si.
— —.....44.3 per cent employ neither si nor fg.

SUBGROUPS.

Si fg sp.... 8.8 per cent employ sign-language, finger-spelling, and speech.
Si fg —....28.5 per cent employ si and fg but not sp.
Si — sp.... 2.1 per cent employ si and sp but not fg.
Si — —....13.3 per cent employ si but not fg or sp.
— fg sp.... 0.9 per cent employ fg and sp but not si.
— fg —.... 2.1 per cent employ fg but not si or sp.
— — sp....43.8 per cent employ sp but not si or fg.
— — —.... 0.5 per cent employ neither fg, si, nor sp (only writing).

Diagrams 25 and 26 contrast the usual means of communication employed by the totally and partially deaf from childhood (under 20), distinguishing the age when deafness occurred by five-year groups.

From these diagrams it appears that comparatively few of the deaf from childhood who lost hearing after reaching the age of 5, whether totally or partially deaf, employ other means of communication than — — sp (speech without sign-language or finger-spelling).

DIAGRAM 25.

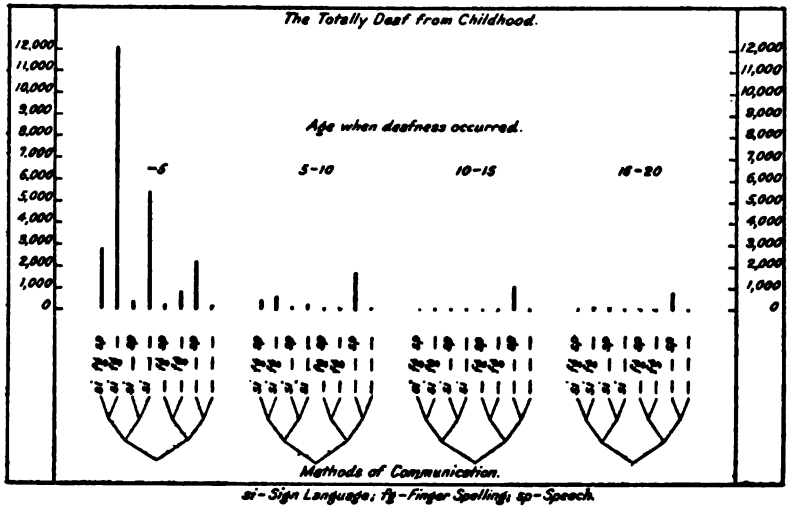
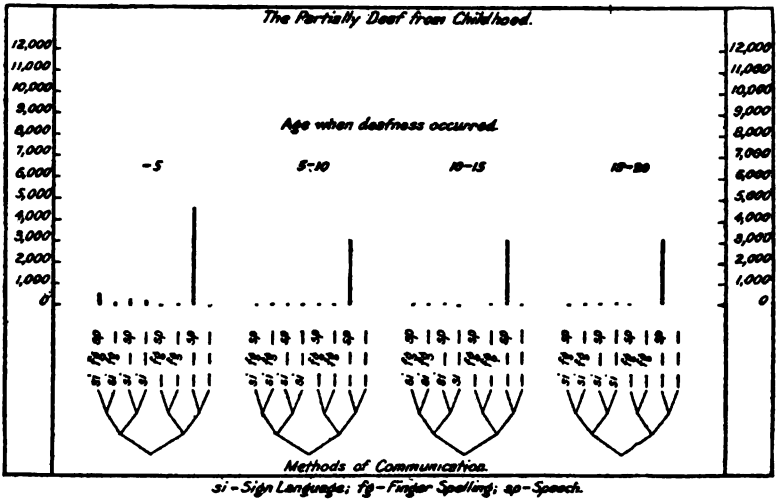


DIAGRAM 26.



Of those who became deaf before reaching the age of 5, the partially deaf, with few exceptions, also employ — — sp (Diagram 26), so that the use of the special means of communication (sign-language and finger-spelling) seems to be confined chiefly to the totally deaf who lost hearing before reaching the age of 5 (Diagram 25). The number of persons employing sign-language or finger-spelling who

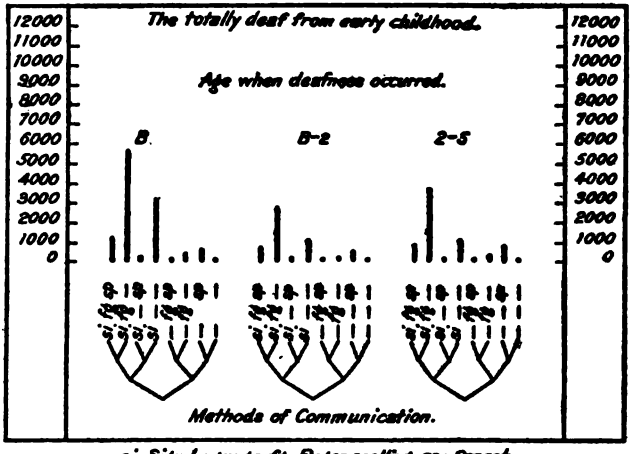
TABLE XXIV.—*The deaf from childhood (under 20), by degree of deafness, age when deafness occurred, and methods of communication.*

METHOD OF COMMUNICATION.	TOTALLY DEAF						PARTIALLY DEAF					
	Total	Age when deafness occurred					Total	Age when deafness occurred				
		Under 5	5 and under 10	10 and under 15	15 and under 20	Not stated (under 20)		Under 5	5 and under 10	10 and under 15	15 and under 20	Not stated (under 20)
Total	33,148	26,152	3,718	1,425	865	988	17,148	6,254	3,300	3,039	3,196	1,359
Methods of communication:												
Not stated	2,184	1,956	116	24	8	80	232	183	13	5	3	28
Stated	30,964	24,196	3,602	1,401	857	908	16,916	6,071	3,287	3,034	3,193	1,331
Si	23,512	20,789	1,738	217	52	716	1,739	1,434	111	21	15	158
—	7,452	3,407	1,864	1,184	805	192	15,177	4,637	3,176	3,013	3,178	1,173
Si fg	16,891	14,978	1,250	108	25	530	989	815	70	8	3	93
Si —	6,621	5,811	488	109	27	186	750	619	41	13	12	65
— fg	1,347	1,132	133	33	14	35	90	66	12	1	2	9
— —	6,105	2,275	1,731	1,151	791	157	15,087	4,571	3,164	3,012	3,176	1,164
Si fg sp	3,455	2,805	465	49	9	127	761	622	58	7	1	73
Si fg —	13,436	12,173	785	59	16	403	228	193	12	1	2	20
Si — sp	534	361	104	36	9	24	466	387	22	10	4	43
Si — —	6,087	5,450	384	73	18	162	284	232	19	3	8	22
— fg sp	346	231	68	24	10	13	70	49	11	.....	2	8
— fg —	1,001	901	65	9	4	22	20	17	1	1	.....	1
— — sp	5,900	2,106	1,711	1,143	787	153	15,077	4,562	3,164	3,011	3,176	1,164
— — —	205	169	20	8	4	4	10	9	.....	1	.....	.....
Si fg sp wr	3,317	2,700	443	46	8	120	699	570	54	7	1	67
Si fg sp —	138	105	22	3	1	7	62	52	4	.....	.....	6
Si fg — wr	12,470	11,300	734	52	13	371	204	174	10	1	2	17
Si fg — —	966	873	51	7	3	32	24	19	2	.....	.....	3
Si — sp wr	140	105	19	9	2	5	45	37	.....	.....	.....	8
Si — sp —	394	256	85	27	7	19	421	350	22	10	4	35
Si — — wr	350	312	25	4	.....	9	8	7	.....	.....	.....	1
Si — — —	5,737	5,138	359	69	18	153	276	225	19	3	8	21
— fg sp wr	307	206	61	20	9	11	50	35	8	.....	2	5
— fg sp —	39	25	7	4	1	2	20	14	3	.....	.....	3
— fg — wr	747	666	52	7	4	18	13	10	1	1	.....	1
— fg — —	254	235	13	2	.....	4	7	7	.....	.....	.....	.....
— — sp wr	415	301	51	35	17	11	85	64	10	4	1	6
— — sp —	5,485	1,805	1,660	1,108	770	142	14,992	4,498	3,154	3,007	3,175	1,158
— — — wr	205	169	20	8	4	4	10	9	.....	1	.....	.....
— — — —	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

do not belong to this group (the totally deaf from early childhood) is so small as to form only an insignificant fraction of the whole, excepting in case of the totally deaf who lost hearing between 5 and 10 years (Diagram 25) and the partially deaf who became deaf before 5 (Diagram 26).

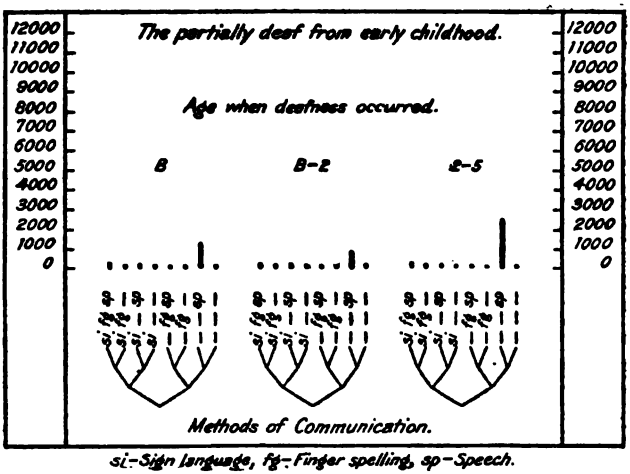
Table XXIV shows, for the deaf from childhood (under 20), the usual means of communication, by degree of deafness and age when deafness occurred.

DIAGRAM 27.



si-Sign language, fg-Finger spelling, sp-Speech.

DIAGRAM 28.



si-Sign language, fg-Finger spelling, sp-Speech.

Diagrams 27 and 28 contrast the usual means of communication employed by the totally and partially deaf from early childhood (under 5), distinguishing the deaf from birth from those who became deaf in infancy (under 2) and those who lost hearing between 2 and 5. The use of the special means (sign-language and finger-spelling) is substantially confined to the totally deaf from early childhood (Diagram 27).

The following percentages relate to the totally deaf from early childhood (under 5), and are based upon 24,196 cases in which the usual means of communication are stated according to the preceding table.

THE TOTALLY DEAF FROM EARLY CHILDHOOD (UNDER 5).

BROAD CLASSES.

Si.....85.9 per cent employ the sign-language.
—.....14.1 per cent do not.

BROAD GROUPS.

Si fg.....61.9 per cent employ both sign language and finger-spelling.
Si —.....24.0 per cent employ si but not fg.
— fg ..... 4.7 per cent employ fg but not si.
— —..... 9.4 per cent employ neither si nor fg.

SUBGROUPS.

Si fg sp....11.6 per cent employ sign-language, finger-spelling and speech.
Si fg —....50.3 per cent employ si and fg but not sp.
Si — sp.... 1.5 per cent employ si and sp but not fg.
Si — —....22.5 per cent employ si but not fg or sp.
— fg sp.... 1.0 per cent employ fg and sp but not si.
— fg —.... 3.7 per cent employ fg but not si or sp.
— — sp.... 8.7 per cent employ sp but not si or fg.
— — —.... 0.7 per cent employ neither si, fg, nor sp (only writing).

Table XXV shows, for the deaf from early childhood (under 5), the usual means of communication, degree of deafness, and age when deafness occurred.

TABLE XXV.—*The deaf from early childhood (under 5), by degree of deafness, age when deafness occurred, and methods of communication.*

METHOD OF	TOTALLY DEAF				PARTIALLY DEAF			
	Total	Age when deafness occurred			Total	Age when deafness occurred		
		Birth	After birth, under 2	2 and under 5		Birth	After birth, under 2	2 and under 5
Total	26,152	12,609	5,998	7,545	6,254	1,865	1,398	2,991
Methods of communication:								
Not stated	1,956	1,183	417	356	183	95	50	38
Stated	24,196	11,426	5,581	7,189	6,071	1,770	1,348	2,953
Si	20,769	9,993	4,839	5,957	1,434	566	430	438
—	3,407	1,433	742	1,232	4,637	1,204	918	2,515
Si fg	14,978	6,738	3,609	4,631	815	287	259	269
Si —	5,811	3,255	1,230	1,326	619	279	171	169
— fg	1,132	564	252	316	66	20	15	31
— —	2,275	869	490	916	4,571	1,184	903	2,484
Si fg sp	2,805	1,081	738	986	622	219	192	211
Si fg —	12,173	5,657	2,871	3,645	193	68	67	58
Si — sp	361	129	94	138	387	173	101	113
Si — —	5,450	3,126	1,136	1,188	232	108	70	56
— fg sp	231	87	71	73	49	14	12	23
— fg —	901	477	181	243	17	6	3	8
— — sp	2,106	784	450	872	4,562	1,182	899	2,481
— — —	169	85	40	44	9	2	4	3
Si fg sp wr	2,700	1,043	710	947	570	198	178	194
Si fg sp —	105	38	28	39	52	21	14	17
Si fg — wr	11,300	5,159	2,695	3,446	174	60	61	53
Si fg — —	873	498	176	199	19	8	6	5
Si — sp wr	105	40	29	36	37	11	16	10
Si — sp —	256	89	65	102	350	162	85	103
Si — — wr	312	147	64	101	7	2	1	4
Si — — —	5,138	2,979	1,072	1,087	225	104	69	52
— fg sp wr	206	78	62	66	35	12	7	16
— fg sp —	25	9	9	7	14	2	5	7
— fg — wr	666	337	141	188	10	3	3	4
— fg — —	235	140	40	55	7	3	.....	4
— — sp wr	301	125	79	97	64	26	18	20
— — sp —	1,805	659	371	775	4,498	1,156	881	2,461
— — — wr	169	85	40	44	9	2	4	3
— — — —	.....	.....	.....	.....	.....	.....	.....	.....

The following percentages relate to the totally deaf from birth, and are based upon 11,426 cases in which the usual means of communication are stated (Table XXV):

THE TOTALLY DEAF FROM BIRTH.

BROAD CLASSES.

Si.....87.5 per cent employ the sign language.
—.....12.5 per cent do not.

BROAD GROUPS.

Si fg.....59.0 per cent employ both sign-language and finger-spelling.
Si —.....28.5 per cent employ si but not fg.
— fg..... 4.9 per cent employ fg but not si.
— —..... 7.6 per cent employ neither si nor fg.

SUBGROUPS.

Si fg sp.... 9.5 per cent employ sign-language, finger spelling and speech.
Si fg —....49.5 per cent employ si and fg but not sp.
Si — sp.... 1.1 per cent employ si and sp but not fg.
Si — —....27.3 per cent employ si but not fg or sp.
— fg sp.... 0.8 per cent employ fg and sp but not si.
— fg —.... 4.2 per cent employ fg but not si or sp.
— — sp.... 6.9 per cent employ sp but not si or fg.
— — —.... 0.7 per cent employ neither si, fg, nor sp (only writing).

Table XXVI shows the total number of deaf persons using sign-language, finger-spelling, speech, or writing, in connection with the age when deafness occurred.

Table XXVI is illustrated by Diagrams 29 and 30.

DIAGRAM 29.

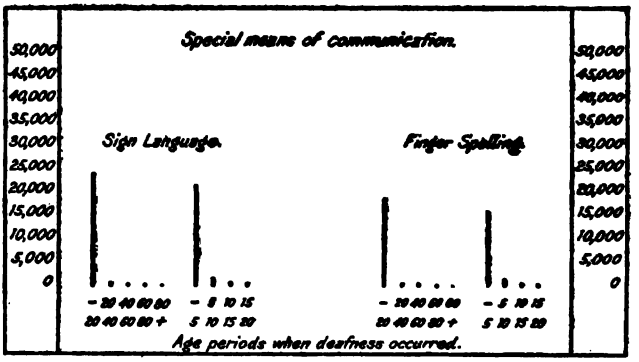
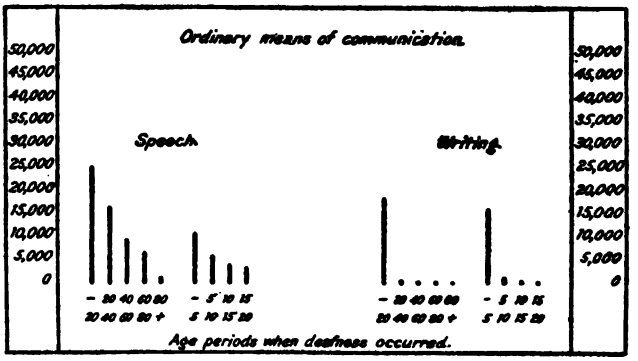


DIAGRAM 30.



From Table XXVI and the diagrams it will be observed that the use of sign-language, finger-spelling, or writing is substantially con-

TABLE XXVI.—*The deaf, by age when deafness occurred, and methods of communication.*

METHOD OF COMMUNICATION	Total	AGE WHEN DEAFNESS OCCURRED			AGE WHEN DEAFNESS OCCURRED DEFINITELY STATED											
		Definitely stated	Indefinitely stated	Unknown	Birth	After birth, under 2	2 and under 5	Under 5	5 and under 10	10 and under 15	15 and under 20	Under 20	20 and under 40	40 and under 60	60 and under 80	80 and over
Total	89,287	81,590	4,630	3,067	14,474	7,396	10,536	32,406	7,018	4,464	4,061	47,949	16,588	9,437	6,595	1,021
Usual means of communication:																
Not stated	2,652	2,364	115	173	1,278	467	394	2,139	129	29	11	2,308	26	13	13	4
Stated	86,635	79,226	4,515	2,894	13,196	6,929	10,142	30,267	6,889	4,435	4,050	45,641	16,562	9,424	6,582	1,017
Stated:																
Sign-language used	25,748	24,515	885	348	10,559	5,269	6,395	22,223	1,849	238	67	24,377	90	30	17	1
Sign-language not used	60,887	54,711	3,630	2,546	2,637	1,660	3,747	8,044	5,040	4,197	3,983	21,264	16,472	9,394	6,565	1,016
Finger-spelling used	19,570	18,698	667	205	7,609	4,135	5,247	16,991	1,465	150	44	18,650	38	6	4	
Finger-spelling not used	67,065	60,528	3,848	2,689	5,587	2,794	4,895	13,276	5,424	4,285	4,006	26,991	16,524	9,418	6,578	1,017
Speech used	64,918	58,480	3,874	2,564	3,669	2,557	4,897	11,123	5,603	4,280	3,998	25,004	16,498	9,396	6,566	1,016
Speech not used	21,717	20,746	641	330	9,527	4,372	5,245	19,144	1,286	155	52	20,637	64	28	16	1
Writing used	19,388	18,513	657	218	7,328	4,108	5,229	16,665	1,488	195	63	18,411	74	21	6	1
Writing not used	67,247	60,713	3,858	2,676	5,868	2,821	4,913	13,602	5,401	4,240	3,987	27,230	16,488	9,403	6,576	1,016

fined to persons who lost hearing before they were 20 years of age; and that comparatively few who became deaf after 5 years of age employ them as means of communication.

The usual means of communication employed by the deaf throw light upon their social environment, for it is obvious that however much the deaf may mingle with people generally in pursuing their daily vocations in life, they are restricted in their social intercourse to persons who understand the means of communication they employ. It is with such persons principally that they associate upon intimate terms, and it is from among them that they choose their partners in marriage.

In considering the four means of communication employed by the deaf it will be noted that speech and writing are understood by hearing people generally, and that sign-language and finger-spelling are not. Speech and writing, therefore, are principally employed by the deaf in communicating with hearing persons; sign-language and finger-spelling principally in talking with other deaf persons.

Although the majority of the deaf can speak, speech is not readily understood by them on account of their deafness. Only those who are partially deaf or who can read the lips can understand it. Writing, therefore, is the only means of communication understood generally both by the deaf and hearing, but its use is limited to educated persons. While writing is commonly employed in communicating with others at a distance, it is comparatively rarely used in talking with people close at hand. A deaf person may converse by writing with a hearing person, or a hearing person with a deaf; but the deaf do not communicate with the deaf in this way, nor the hearing with the hearing. Writing, therefore, as a direct means of communication, is limited to the communications of the deaf with the hearing, and *vice versa.*

In communicating with hearing persons, speech without writing (sp —) is used by the deaf who speak well, writing without speech (— wr) by those who do not speak at all, and both speech and writing (sp wr) by those who speak imperfectly—not necessarily both at the same time, but speech in talking with persons who can understand their imperfect articulation, and writing with those who do not. Both speech and writing (sp wr) may also be reported by persons who speak well, in which case we may interpret the returns to mean that these deaf persons were poor lip-readers, and could not understand the speech of the persons with whom they conversed, who were therefore obliged to reply by writing.

Where speech is reported as the sole means of communication (— — sp —) we may interpret this to mean that the deaf persons can understand speech as well as use it, so that other means of communication are not resorted to. Such persons, therefore, are either partially deaf, or are persons who are able to read the lips; and their social intercourse is with hearing persons rather than deaf.

The sign-language is a special language peculiar to the deaf. It is not understood by people generally, and to the majority of the deaf themselves it is a foreign language. If, as is probable, the deaf who understand it are chiefly those who use it, then it is obvious that more than two-thirds of the deaf (70.3 per cent) do not understand it, for only 29.7 per cent employ it as a means of communication, and these consist largely of persons who are totally deaf from early childhood (under 5).

The sign-language, then, is employed chiefly by the deaf in conversing with other deaf persons who lost hearing completely in early childhood (under 5). It is intelligible to only a small section of hearing persons, who consist mainly of those who, as children, were thrown closely into association with the deaf who employed it—chiefly the brothers, sisters, and children of persons totally deaf from early childhood (under 5). Few hearing adults acquire the language, and these consist mainly of professional instructors of the deaf.

Finger-spelling is employed incidentally by the educated deaf who use the sign-language in talking with one another, but chiefly as a means of expressing proper names, like the names of persons and places. Comparatively few of the deaf use it alone as a means of communication except in talking with hearing persons who understand it. The limitations to its use are the same as those noted for the sign-language, except that it is understood by a somewhat larger circle of hearing persons. Hearing adults easily learn to spell upon their fingers, whereas they find it as difficult to acquire the sign-language as any foreign tongue.

The American Manual Alphabet employed in finger-spelling by the deaf is shown in the illustrations[1] on pages 96, 97, and 98, which have been copied from plates supplied by the Volta Bureau, which were prepared under the direction of the late Dr. Joseph C. Gordon.

In concluding this subject we may say that when the English language alone is employed in its spoken, written, or finger-spelled

[1] Omitted from this republication.

forms without any recourse to the sign-language (— fg, sp, or wr) the deaf persons associate principally, if not exclusively, with hearing persons.

Where the sign-language (si — — —) alone is employed they associate principally, if not exclusively, with persons totally deaf from early childhood (under 5) and their hearing brothers, sisters, or children.

Where both the sign-language (si) and the English language (fg, sp, or wr) are employed, they associate with both of the classes referred to above.

(*To be continued.*)

DEAF STUDENTS IN A HIGH SCHOOL FOR THE HEARING.

FRANCES WETTSTEIN, MILWAUKEE, WIS.

On January thirty-first, 1907, four pupils graduated from the Milwaukee School for the Deaf. Two of these are attending high school with hearing boys and girls. They are young people of average ability, and somewhat timid and retiring in disposition; therefore, it was deemed best to place them in charge of a special teacher half a day.[1] This teacher assists them in the more difficult studies and is helpful in a social way. She sits with them, and, if they fail to understand the regular teacher, she repeats, without voice, what the latter has said. The deaf pupils recite as the other students do. In the afternoon they get along without any special help.

This arrangement is only an experiment, but, judging from the results gained in so short a time, it undoubtedly will result in the permanent appointment of a special teacher for the deaf in one of the city high schools. This would enable every pupil of average ability to gain a high-school education, while heretofore only the brightest and those possessing a great deal of self-assertion could do it.

Graduates from any accredited day school in the State would be admitted, and it is hoped that enough students will apply to warrant the appointment of a permanent teacher.

Thanks are due to the Superintendent of the Public Schools of Milwaukee for his ready grasp of the situation, and for his interest in solving the problem of the higher education of the Deaf in Day Schools.

[1] In a private letter to the editor, Miss Wettstein gives the following additional facts and observations, which we take the liberty of printing: "The girl [one of the two pupils] attending High School is sixteen years of age, was born absolutely stone deaf, and has the mental ability of the average girl of that age. She needs very little help in lip-reading, does remarkably well in her English and algebra, and is exceedingly happy in her work and with her associates. Of course, many others have gone to hearing schools without special help, but those were only the brightest ones or those who could afford to go to private schools, where the teachers were paid for the special help. By having a special teacher at the high school, it will give every pupil—rich or poor, bright or those with only average mental ability—an opportunity to gain a higher education in conformity with the fundamental principles of the Day Schools. I do feel elated over the achievement, if only enough will apply to warrant the appointment of a permanent teacher."

NOTES FROM GERMANY.

AMKEA SCHMIDT, EMDEN, GERMANY.

About Michaelmas, 1906, a great change took place in the Institution for the Deaf in Emden (Province of Hannover). Oberlehrer Otto Danger, having been for twenty-four years the principal of the school, asked for his dismission, and it was granted to him. He went with his family to Goslar, Hanover, where he is residing now.

Mr. Heinrich Stelling was chosen his successor by the Board of Trustees, and our government accepted him. We all know Mr. Stelling well already, for he had been working with us as a teacher of our school from 1890 till 1905. At Easter, 1905, two years' leave was granted to Mr. Stelling. He wanted to carry out one of his favorite ideas to establish an institution for feeble-minded hearing children. Kirchrode, near Hannover, he chose for his abode, took a nice house and garden, and had great pleasure seeing his work successful. From all parts of Germany pupils were sent to him, and they found a warm welcome and a very nice, comfortable home with Mr. Stelling and his wife. After two years the "Heilpädagogium" (that is the name of Mr. Stelling's institution) is really flourishing, but when the call came to Mr. Stelling to become principal of the school where he had worked for so long, he accepted, and we are glad to have him back. Surely our Institution will benefit by his experience which he gathered, not only while teaching, but also by paying visits to the best German Institutions, and also the famed Norwegian Schools. Mr. Stelling certainly is a man who is in earnest in his work, and does it thoroughly; so we are full of hope that our school will prosper under his guidance and care.

To make the following understood, I have to mention, first, that our German customs of training the deaf are entirely different from what you see in America. Our deaf leave school at 14 or 15 years of age, without having been trained to earn their living. They do not understand any craft at all, and have to learn everything, as far as the craft is concerned, after school. The Board of Trustees therefore tries, during the last year of pupils in school, to find capable masters who are willing to take upon them the whole care, giving them lodgings, food, and clothing, and teaching them during the

time of their apprenticeship, which lasts generally four years. It would be very difficult to find always willing men if our government had not stepped in. In 1817 an order was issued that every craftsman who undertakes the training of a deaf boy in his own craft, so as to put him in the way of earning his living, should receive at the end of the apprenticeship, the pupil having passed an examination and being found able, the sum of M. 150 (about $37). Just now I read in the newspaper that the reward is to be increased to M. 200 (about $50). The reason given for the increase is that living has become so much more expensive, lodgings and food having considerably risen in price.

A VISIT TO THE CHEFOO, CHINA, SCHOOL FOR THE DEAF.

DUDLEY N. CARPENTER.

[The following letter, sent to a church paper, but not used by it, is here published as giving our readers a view of Mrs. Mills' school and its work that we feel sure they will be glad to have.—EDITOR REVIEW.]

U. S. S. RALEIGH, MANILA, P. I.,
December 15th, 1906.

Dear Sir:—I have recently visited a school for the Deaf in Chefoo, China, which impressed me as being the beginning of a great work among the Chinese. I therefore wish to bring it to the attention of your readers in order that those who are seeking to help a deserving mission may know of its existence.

Having heard much adverse criticism of the actual benefit of Christian missionary work among the Chinese, I took the first opportunity to visit these schools in Chefoo in order to judge for myself. Through the courtesy of Rev. George Cornwell I spent the day at the Presbyterian Mission and visited Mrs. Mills' School. I have only praise and admiration for the work being done by all these teachers, and I also wish to add my testimony to the devotion of the Roman Catholic Missionaries, Sisters, and teachers of the French Franciscan's Mission, Chefoo. Quite as important in sustaining the missionary work in all parts of the Orient is the Chinese Inland Mission School at Chefoo, where the children of Missionaries are received and educated, thus allowing their parents to remain at their posts and be free from anxiety as to their children receiving a proper

education. The spirit of faith which actuates these Evangelistic Missionaries of the Chinese Inland Mission was illustrated by the secretary of the school, Rev. T. G. Willet, who kindly showed me about. He told me "that not one cent had been asked for this school, and that it had been built and sustained by voluntary contributions in answer to prayer." Also I would mention the native preachers who conduct the services at the street mission chapel in the native city. Certainly I saw enough while at Chefoo, a seaport town, to justify every confidence in the benefit of Christian Missions among the Chinese, and yet I am told that the best work can only be seen in the interior of China.

Mrs. Mills' School, which I wish to particularly describe, I found to be purely a Christian work, undenominational, and not under any mission. In the future, when the Chinese see the benefits of this education of the Deaf and Dumb, they will undoubtedly support their own schools, but until then the continuation and enlargement of this work must depend upon the benevolence of those interested. The annual expenses have been about $1,500, and there is still an indebtedness of $1,000. The property of the school is managed by a Board of Directors. Only boys can be accommodated in the present buildings, and their number is limited from 15 to 20. It is hoped that a sufficient sum may be obtained to enable a building for girls to be erected on land already owned by the school, and also to enlarge the quarters for the boys in order to accommodate more pupils. The training of native teachers is an important feature of the work, and promises the extension of such schools in other parts of China. If there was room for them many boys and girls would come to this Chefoo School, and as $26 is a sufficient sum to feed and clothe a child for a year, the expense of maintenance is not unreasonable.

It is estimated by using the statistics of other countries, 1 to 1,000, that there are approximately 400,000 deaf and dumb in China. The comparatively few deaf women in proportion to men may be owing to the fact that girl babies are only tolerated, and, especially if deaf, are frequently destroyed. The boys, on account of ancestral worship, are generally spared. Nothing whatever is done for the Chinese deaf by their own people, as their condition is supposed to be hopeless. In judging the Chinese for their indifference, we must not forget that even in our professedly Christian countries it is hardly a hundred years since we have taken an interest in our deaf and dumb. In America, the first school was not opened until 1817.

The testimony of Dr. Gallaudet "that deafness presents no obstacle to a very high degree of mental culture" has been demonstrated by the graduates of Gallaudet College, who have succeeded in almost every profession or occupation of life. This is sufficient answer to those who underrate the mental capacity of the deaf, and consider it a waste of time or money to educate them. The mental emancipation from their ignorance means a moral and spiritual elevation as a logical sequence. As one missionary expressed it, "It is like giving them a soul." The intellectual faculties of the deaf are latent, not non-existent, and the only thing necessary to bring out these faculties is education. A deaf Chinese boy is therefore likely to be quite as intelligent and worthy of education as a normal Chinese boy, and his need of it is greater.

The founding of this Chefoo School for the Deaf is fully described in a most interesting pamphlet written by Miss Sara Entrican, entitled "The Story of the Chefoo School." In this letter I have fully utilized and quoted the facts to be found in that story, and wish to express my indebtedness here. One cannot but be impressed with the idea that Mrs. Mills has been providentially chosen to start this great work in China, and the courage and perseverance she has shown in the face of great obstacles deserves recognition and aid, and she should be liberally supported in her endeavor to reach and rescue these imprisoned souls. The work by this school comprises the development of methods which are adapted to the Chinese; also translating and printing the books and lessons. By these means the deaf have been taught to read and write the Mandarin characters, or official language, to speak Chinese, and to read the lips of those who speak to them. These native teachers have already been trained. The difficulties of teaching our own deaf should enable us to realize in a small degree how great the task of Mrs. Mills has been to develop methods suitable to the Chinese and their language. When I first visited the school these methods were demonstrated to me by Mrs. Mills, and are, like everything ingenious, simple and easy. I could well understand the wonder of a native minister who first heard some of Mrs. Mills' boys speak, and exclaimed, "I have seen my first miracle;" and as a physician, I could further appreciate the infinite patience necessary to teach these creatures to form words from their inarticulate sounds.

Mrs. Mills was especially proud of the progress made by an attractive seven-year-old boy who had been in the school barely three months. His quick and accurate selection of the paper squares on

which were written the appropriate Chinese characters, describing the pictures of familiar objects and scenes, could not have been excelled by any child. His copy-book in which he was learning to write the Chinese characters was a model of neatness. To illustrate the method of lip-leading and speaking, he was made to repeat certain words spoken by another small boy. Mrs. Mills must have felt a deep joy when at the close of his lesson he gave her a big hug and said, in English, "I love you." His curiosity as to who I was and where from was shown by his eager fingers spelling out questions to his teacher, thus illustrating the method of finger-spelling which is learned by these pupils almost immediately. By this method, and with pantomime and gesture, they readily communicate with each other, and seem to get much happiness out of life.

During a second visit to the school I saw some work of the more advanced pupils who had been under instruction for two or three years. Not only did they read and write the Mandarin characters, but also Chinese written with English letters. The Lord's Prayer was recited in Chinese, and one boy sang a well-known hymn in Chinese, every note of which was perfect. The eager and intelligent facial expression of some of the pupils anxious to show their progress was a sufficient answer to the question if their education is really worth while.

All general correspondence and requests for literature regarding this school should be addressed to Miss Harriet E. Hamilton, 505 East Avenue, Rochester, N. Y. Gifts may be sent through Mrs. Charles Hand, Treasurer Presbyterian Board of Foreign Missions, 156 Fifth Avenue, New York City.

THE POSSIBILITY OF THE EDUCATION OF THE BLIND-DEAF.[1]

G. FERRERI, ROME, ITALY.

In 1843, Tommaso Pendola, founder of the Institute for the Deaf in Siena, compiled the first statistics of the Deaf in Italy, limiting himself, for reasons easy to understand, to the Grand Duchy of Tuscany.

At the end of his brief report, Pendola noted with sorrow the existence of two blind deaf-mutes (one in the Province of Florence and the other in that of Arezzo), and wrote: "To the misfortune of deaf-mutism is also added that of blindness, a misfortune to be lamented, since it excludes any possible capacity for education."

This opinion of Pendola is general even today, after sixty years, among the majority of Italians. And it is really a shame after all the progress which has been made in the Pedagogy of abnormal children.

I have desired, therefore, to avail myself of this occasion of a Congress "for the Blind" to diffuse as much as possible the good news that also the Blind-Deaf, even when so from birth, are capable of education; and, therefore, it is the duty of modern society "to make every effort to evolve an intelligence from that which has been obstructed in its development by deficient senses, and to make of it a social being."

The members of the Congress have seen already in the workshops, judiciously annexed to the Exhibition by the Organizing Committee, an individual who, although blind and deaf from infancy, is, nevertheless, well enough educated to put himself into direct communication with the visitors, as well as to apply himself to a regulated and profitable work.

This circumstance, quite unexpected to me, relieves me from discussing at length the subject which I have chosen. I will, therefore, restrict myself to a few observations, which have to do principally with the first process of this special instruction.

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[1] Paper read at the Congress "for the Blind," Rome, Dec. 3, 1906.

The education of the Blind-Deaf dates from 1839, and owes its origin to the courageous initiative of Dr. Howe, the founder of the great Institute for the Blind in Boston, Mass.

The growth of this education was, however, slow and difficult. In Europe it has today its best results in Sweden, where it seems that deaf-mutism complicated by blindness is not so rare as it is, fortunately, with us.

Our most recent statistics give the figures of 196 Blind-Deaf. But one must reflect that the majority of these are Deaf who have become Blind, or Blind who have become Deaf, when they were already in possession of a certain degree of instruction, and, what is more important, of spoken and written language.

Our case, therefore, is not one of considering the question of special institutions, as happened recently in the Provincial Administration of Berlin. Rather, we should make at once an important distinction.

It is asked: "Should the Blind-Deaf be admitted to the Institutes for the Blind, or to those for the Deaf?"

The answer is easy: In reference to those individuals who have become blind and deaf after having learned their mother-tongue, their place is in the Institute for the Blind, because there they can with easy means cultivate their minds and apply themselves to some manual work; if, instead, these individuals are blind and deaf from birth, or from early infancy, then they must be sent to an Institute for the Deaf, where they can also learn spoken language.

This distinction is important for practice.

But let us pass on to that which makes the greatest impression on those endowed with all their senses, and not versed in the studies of the pedagogy of abnormals.

It seems impossible! they say; "How can a person deprived of sight and hearing ever succeed in understanding the wonders of the world surrounding him?" That this seems impossible, there is no doubt, but that it is possible is most certain. The results of the education of Laura Bridgman and Helen Keller, to mention only those most noted, are now in the possession of the public, both scientific and unlearned. In order to reach this result, however, an uninterrupted instruction of many years was necessary. It was necessary also that intelligent and devoted teachers should dedicate themselves entirely to this assiduous, personal instruction. This does not mean that, to instruct a Blind-Deaf person, mysterious, supernatural means are required; or such as must remain the privilege of the few, or to

be kept secret. The teaching of the Blind-Deaf is based upon the substitution of the senses, as the simple means of stimulating the latent intelligence.

There is, therefore, a presupposition of essential importance, which is, however, common to the instruction of every normal person. One must presuppose intelligence, and this must be confirmed by experience. By this the presupposition becomes a fact, upon which is founded the gradual psychic development, which will be more or less elevated according to the natural talents of the individual as well as the means used and the method applied.

But, they ask, what is intelligence? Let us leave it to the philosophers to define it, who will find in this material for infinite reasoning, and for many and various theories on the origin of ideas.

The educator of the Blind-Deaf has no need of either definitions or theories, nor does he need to choose this or that system of philosophy. For him it is sufficient to ascertain whether the child *understands* or not.

Starting with the hypothesis that the mind of the Blind-Deaf in its first steps cannot differ from that of a normal child, it is only necessary to observe if its way of acting corresponds to the ordinary conception of a normal child's intelligence. Of such a one they say, that he understands, when he just begins to distinguish one thing from another, or one person from another. The same may be said of the Blind-Deaf child if he is not an idiot,[1] although he is found at first in an idiotic state of mentality on account of the lack of the greater number of sensorial experiences which stimulate the normal child to perception, yet he will soon show that he understands that *there is something outside of himself*. And then, because his seeking fingers come into continuous contact with *objects*, they will become the support of his sense of feeling, the foundation of perception. Hence the deaf-blind child must be furnished every opportunity to *touch* everything that is accessible to the touch of the normal child. This is the necessary and sufficient means for taking the first step toward the development of the intelligence.

Leaving out the question, which is useless for us, of the relative importance of the senses in respect to Psychology and Pedagogy, Condillac, for example, affirms that it is precisely the sense of touch

[1] This may happen if the illness which deprived him of sight and hearing, or the arrested development of these senses, has also compromised his brain with serious injuries. This was generalized of the blind-deaf before their education was thought of.

which communicates to the other senses the power of judging of exterior objects.

However that may be, here one treats of limiting the field of observation in regard to the five senses. We may say that the normal child receives its impressions of the external world through five doors, while the Blind-Deaf has only three at his disposition. Of these three, one alone is strictly necessary for the needs of the blind-deaf child for fixing with a sign the object to which his attention will and must be attracted and that of those who approach him.

Hence it is necessary for him to have *signs,* the use of which demands only the power of distinguishing the *sign* from the thing *signed* or *signified.* With the conscious use of signs, begins the second step of the psychic development of the Blind-Deaf.

As long as it was believed that language spoken and perceived by the ear was necessary and even indispensable for the development of the mind, it was impossible to think of the education of those deprived of speech and hearing. Therefore, centuries of neglect on the part of society towards the deaf and dumb, and still more so towards the Blind-Deaf.

The first instruction dated, indeed, from when Girolamo Cardano observed that a *written sign* could be sufficient for a deaf-mute to distinguish, mark, and recall an object which the hearing child fixes in the mind by a word heard, and repeated in imitation. But this was not sufficient for the Blind-Deaf. For him it was necessary, while following the same psychic process, that to every object touched there should be associated a sign written in such a way as to be perceived also by the touch. This Dr. Howe did by fastening on each object presented to Laura Bridgman a piece of paper with its name written in Braille upon it. Afterwards the manual alphabet was used, which is a rapid and sure writing of the touch, as the members of the Congress present have been able to see in practice with the deaf-blind Malossi of the Institute of Naples.[1] It is simply a question of marking the objects with a system of signs, perceptible to the touch. To *feel* instead of *seeing* and *hearing.* That this substitution is possible, is demonstrated by the education of the Blind, the Deaf, and the Blind-Deaf; for all of whom, as well as for normals,

[1] I must notice, however, that the Manual Alphabet of Moon, slightly altered for conversation with Malossi, seemed to me more difficult than that which is used with deaf-mutes, and which allows one to speak rapidly even when walking, as I did frequently in my conversations with Helen Keller.

the instrument for the development of the mind is, in final analysis, their mother tongue.

It is easy to understand that this development is possible, once we are persuaded that the mind to be put into action, has only need of a stimulus, and that this stimulus is the reciprocal expression of the impressions of the external world.

Given then this belief in the existence of things, which is common to all intelligent individuals from the moment they are able to distinguish *"I-from-not-I,"* and given a language which fixes the particular ideas offered to the senses by the things, the life of thought is incessant. The human mind ascends from particular ideas to those general and common by way of abstraction. Hence, with sensations are mingled judgments of them, and the expression of this in signs—whether these are words spoken, written, or spelled by the manual alphabet—constitutes the psychic labor, upon which is based the development of the intelligence.

Even if the famous compensation of the senses were true, it would not be necessary, in the ordinary sense, for understanding. The compensations in the education of the Blind and Blind-Deaf are many and varied and undetermined because complex, but as Dr. Romagnoli has shown, are psychic compensations, and which I would say are produced by a *voluntary attention.* They are therefore compensations of education, which should not be lacking to the normal, if it were possible to place him in the same conditions, provoked by artifice, of the real insensibility of this or that sense.

Not having been able to explain the reason of such compensations, it has happened in cases, now too noted, of uncommon intellectual development in persons deprived of sight and hearing, that one has supposed the existence of a sixth sense. This, however, is a prejudice based upon the traditional consideration of the famous *five* senses. We ought, instead, to think that the phenomenon of blindness complicated with deaf-mutism offers us a clear testimony of the possibility of a great degree of development of the primitive sense, which is more general in nature, that of touch, that is, the sense from which sight and hearing seem to have been developed.

One must think, therefore, that in us all exist latent powers which have not yet been put into action because not necessary. Given, however, the deprivation of sight and hearing, these powers develop themselves according to the needs and the surroundings. Of this fact we have manifold examples in the various manifestations

of vegetable and animal life. For example, the adaptation of the organs to the environment.

But of all this Dr. Romagnoli spoke most ably to this Assembly yesterday, and I must not spoil the impression which all received from his speech by useless repetitions.

I wish to insist upon the fact that the sense of touch must today be regarded with greater largeness than formerly, when they attributed to its fineness physically, the phenomena depending on its modifications and specializations. Among the principal and most common may be noted the so-called muscular memory, the sense of temperature, the sense of the physical and chemical conditions of the atmosphere, the aërial tactile vibrations, all of which coöperate to direct the Blind or Blind-Deaf. But also of this it is superfluous that I speak at length, after the splendid essay issued recently by Dr. Romagnoli, which, it is to be hoped, will be followed by others. I express this hope, not only that all may learn to know a new field of psychical observation, but also because I hope that Romagnoli's studies may have as effect, in a time not too far distant, the reform of the Pedagogy of the Blind.

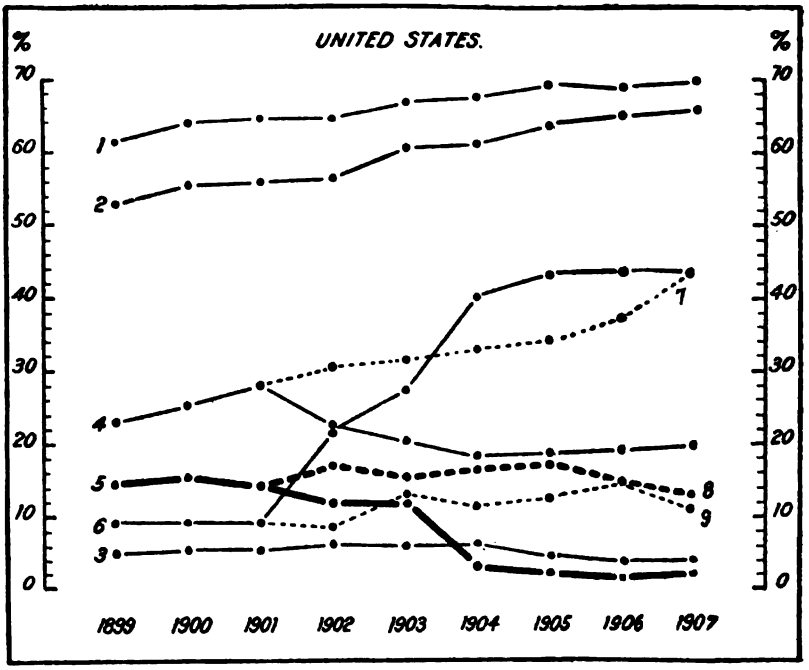
In conclusion, I wish to refer briefly to a case which seems to me most illustrative of this order of ideas.

When Helen Keller was taken one day for the first time into the study of a clergyman who was one of her Boston friends, after turning her head this way and that inquisitively, she remarked, to the great surprise of those present, that the room was large and low-ceiled, and that there were many books in it.

Even leaving out of the question the sense of smell, which in Helen is no longer so acute as eight or ten years since, one can explain this incident by merely reflecting that we all, in a less sensitive manner, have every day and hour similar sensations of our surroundings. The various conditions of the atmosphere, for example, make a profound impression on the nervous system. Every one can testify as to these conditions simply from the consequent modifications in the respiration, which is the physiological function most easily affected by the volume of air, and also by thermal, hydrological, and olfactory modifications which in it are constantly changing. One must conclude that there are a great quantity of impressions, even although fragmentary, of which we have no actual consciousness, only because we lack the power of *continuous* and *insistent attention.* And that it is this, and this alone—given the intelligence—that constitutes the condition by which the Blind-Deaf are capable of education.

The fact of the many educated Blind-Deaf, especially in the United States, where they do not make a question of material means when it is necessary to elevate the intellectual and social life of the citizen, whether normal or abnormal, proves that this special instruction does not present any excessive difficulty.

Hence, it would be ridiculous on the part of educators to exaggerate the difficulties, and still more so to hide mysteriously from the eyes of the unlearned the easy process of the education of the Blind-Deaf. It should, instead, be proclaimed that such an education is possible, and that it is a crime in society to abandon, as in the past, these unfortunate creatures to a vegetative life, useless to themselves and a load to others.



NUMBER OF PUPILS.

Year	Taught Speech	Speech Used	Not Used†	Taught by Speech			Schoolroom Usage		
				S	SS‡	SSS‖	S	SS‡	SSS‖
	1	2	3	4	5	6	7	8	9
1899.....	6460	5584	535	2496	1549	975			
1900*.....	6884	5969	582	2757	1643	995			
1901.....	7131	6167	621	3020	1611	1009			
1902.....	7164	6276	712	2506	1323	2412	3400	1903	938
1903.....	7561	6793	645	2331	1364	3098	3552	1754	1487
1904.....	7578	6858	720	2050	305	4503	3715	1854	1289
1905.....	7994	7373	621	2153	278	4942	3911	2038	1424
1906.....	8145	7679	466	2279	252	5148	4274	1682	1723
1907.....	8320	7852	468	2359	393	5100	5067	1521	1264

PERCENTAGE OF PUPILS.

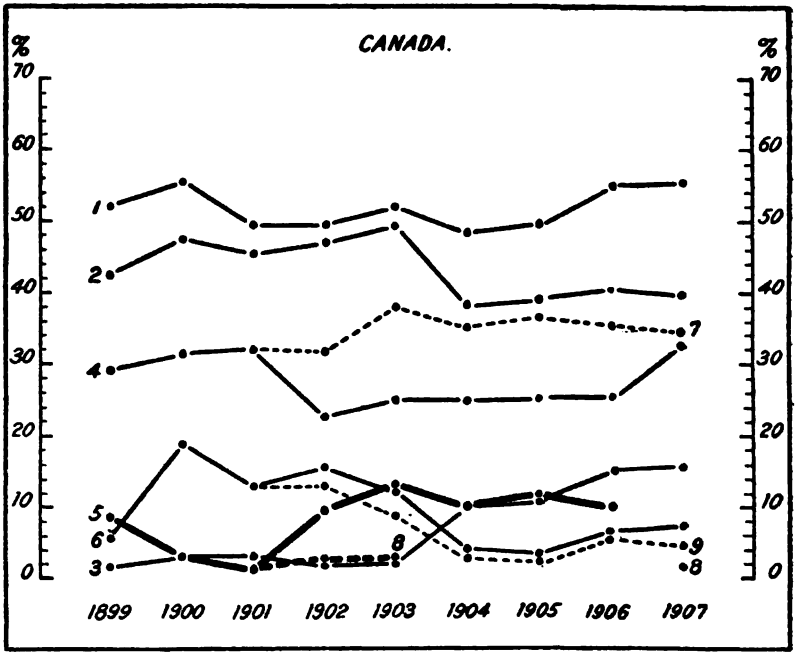
1899.....	61.4	53.1	5.1	23.7	14.7	9.2			
1900.....	64.0	55.5	5.4	25.7	15.3	9.2			
1901.....	64.7	56.0	5.6	27.4	14.6	9.2			
1902.....	64.7	56.7	6.4	22.6	12.0	21.8	30.6	17.2	8.5
1903.....	67.2	60.3	5.8	20.0	12.1	27.4	31.5	15.6	13.2
1904.....	67.3	60.9	6.4	18.2	2.7	40.0	33.0	16.5	11.4
1905.....	69.1	63.7	5.4	18.6	2.4	42.7	33.8	17.6	12.3
1906.....	69.0	65.0	4.0	19.3	2.1	43.6	36.2	14.2	14.6
1907.....	70.1	66.1	4.0	19.9	3.3	42.9	42.7	12.8	10.6

*For corrected Table for 1900, see Vol. II. p. 549. †Column 3, "not used," includes all cases where it is not known that speech is used as a means of instruction. ‡Columns 5 and 8 include unclassified cases taught by SS. ‖Columns 6 and 9 include unclassified cases taught by SSS.

KEY TO SPEECH DIAGRAMS.

The diagrams represent graphically the percentage of pupils taught speech in schools for the deaf in the United States and Canada, according to the statistics which have been gathered annually by the REVIEW since 1899. The figures on which the diagrams are based are given in each case immediately under them and the columns are numbered to correspond to the curves upon the diagrams.

1. Total taught Speech. (*Summation of all cases.*)
2. Speech *used* as a means of instruction (*with or without Spelling or Sign-language*).
3. Taught Speech, but Speech *not used* as a means of instruction.



NUMBER OF PUPILS.

Year	Taught Speech	Speech Used	Not Used	Taught by Speech			Schoolroom Usage		
				S	SS	SSS	S	SS	SSS
	1	2	3	4	5	6	7	8	9
1899..	404	330	14	225	64	41			
1900.....	434	411	23	247	20	144			
1901.....	384	361	23	251	8	102			
1902.....	393	377	16	180	75	122	250	20	107
1903.....	387	367	20	183	93	91	283	21	63
1904.....	354	282	72	179	75	28	259	—	23
1905.....	346	273	73	174	76	23	255	—	18
1906.....	408	296	112	183	69	44	254	—	42
1907.....	421	301	120	246	—	55	259	8	34

PERCENTAGE OF PUPILS.

1899.....	52.1	42.6	1.8	29.0	8.3	5.3			
1900.....	55.4	52.5	2.9	31.5	2.6	18.4			
1901.....	48.8	45.9	2.9	31.9	1.0	13.0			
1902.....	49.2	47.2	2.0	22.6	9.4	15.3	31.4	2.6	13.4
1903.....	51.8	49.1	2.7	24.5	12.4	12.2	37.8	2.8	8.4
1904.....	48.2	38.4	9.8	24.4	10.2	3.8	35.3	—	3.1
1905.....	49.5	39.1	10.4	24.9	10.9	3.3	36.5	—	2.6
1906.....	55.4	40.2	15.2	24.8	9.4	6.0	34.5	—	5.7
1907.....	55.7	39.8	15.9	32.5	—	7.3	34.2	1.1	4.5

KEY TO SPEECH DIAGRAMS—CONTINUED.

MEANS OF INSTRUCTION IN SCHOOL AND OUTSIDE.

4. Taught by Speech (*no Spelling, no Sign-language*).
5. Taught by Speech and Spelling (*no Sign-language*).
6. Taught by Speech, Spelling, and Sign-language.

SCHOOLROOM USAGE.

(Without reference to outside instruction.)

7. Taught by Speech (*no Spelling, no Sign-language*).
8. Taught by Speech and Spelling (*no Sign-language*).
9. Taught by Speech, Spelling, and Sign-language.

TABLE I.—SCHOOLS FOR THE DEAF IN THE UNITED STATES.

Arranged alphabetically according to location.

State or Territory	Town	Street or District	Official Name of School	Chief Executive Officer
Alabama	Talladega		Alabama Institute for the Deaf	Joseph H. Johnson, M. A.
Arkansas	Little Rock		Arkansas Deaf-Mute Institute	Arthur G. Mashburn.
California	Berkeley		California Institution for the Deaf and the Blind.	W. Wilkinson, M. A., L. H. D.
do	Los Angeles		Los Angeles Oral School for the Deaf	Mary E. Bennett.
do	Oakland	Seventeenth and West Sts.	Oakland Oral Class for the Deaf	Charlotte Louise Morgan.
do	do	Telegraph Ave., No. 4002	St. Joseph's School for the Deaf	Sister M. Valeria.
do	Sacramento	Twenty-seventh and G Sts.	Sacramento Day-School for the Deaf	M. Ina Smith.
do	San Francisco	Grove St., near Larkin	San Francisco Day-School for the Deaf	Mrs. Jennie B. Holden.
Colorado	Col. Springs		Colorado School for the Deaf and the Blind	W. K. Argo, M. A., LL. D.
Connecticut	Hartford		American School for the Deaf	Job Williams, M. A., L. H. D.
do	Mystic		Mystic Oral School for the Deaf	Frances E. Gillespie.
Dist. Columbia	Washington	Kendall Green	Columbia Institution for the Deaf and Dumb	E. M. Gallaudet, Ph. D., LL.D.
			Comprising { The Kendall School for the Deaf	James Denison, M. A.
			Comprising { and Gallaudet College	E. M. Gallaudet, Ph. D., LL.D.
Florida	St. Augustine		Florida Institute for the Deaf and the Blind	A. H. Walker, B. A.
Georgia	Cave Spring		Georgia School for the Deaf	Wesley O. Connor.
Idaho	Boise		Idaho School for the Deaf and the Blind	James Watson.
Illinois	Aurora	Center School	Aurora Day-School for the Deaf	Maggie Neel Proctor.
do	Chicago	Ashland and Wabansia Sts.	Burr Public Day-School for the Deaf	Mary T. McCowen.
do	do	Ashland and West 13th Sts.	Clarke Public Day-School for the Deaf	
do	do	Chestnut and N. State Sts.	Ogden Public Day-School for the Deaf	
do	do	Edgewood Ave. & Catalpa Ct.	Darwin Public Day-School for the Deaf	
do	do	46th St. and Hermitage Ave.	Seward Public Day-School for the Deaf	
do	do	Harrison, near Halstead St.	Dore Public Day-School for the Deaf	
do	do	Ingleside Ave. and 54th St.	Kozminski Public Day-School for the Deaf	
do	do	Rockwell St. n'r Fullerton Ave.	Goethe Public Day-School for the Deaf	
do	do	70th St. and Yale Ave.	Yale Public Day-School for the Deaf	
do	do	68th St. and Stewart Ave.	Normal Practice Public Day-School for the Deaf.	
do	do	31st and Loomis Sts.	Holden Public Day-School for the Deaf	
do	do	21st Place and California Ave.	Hammond Public Day-School for the Deaf	
do	do	21st and Robey Sts.	Froebel Public Day-School for the Deaf	

do	... do	South May St., No. 409	Ephpheta School for the Deaf	Margaret Cosgrove.
do	... do	Yale Ave., No. 6550	McCowen Oral School for Young Deaf Children	Cornelia D. Bingham.
do	Dundee		Dundee Day-School for the Deaf	Mary Loar.
do	Jacksonville		Illinois Inst. for Education of Deaf and Dumb	Charles P. Gillett.
do	Moline		Moline Day-School for the Deaf	Ettie Belle Root.
do	Rock Island	'th Ave. and 22d St.	Rock Island Day-School for the Deaf	Meta C. Wittig.
Indiana	Indianapolis		Indiana Inst. for Education of Deaf and Dumb	Richard Otto Johnson.
Iowa	Council Bluffs		Iowa School for the Deaf	Henry W. Rothert.
Kansas	Olathe		Kansas School for the Deaf	H. C. Hammond, M. A.
Kentucky	Danville		Kentucky Inst. for Education of Deaf-Mutes	Augustus Rogers, M. A.
Louisiana	Baton Rouge		Louisiana Inst. for Ed. of Deaf and Dumb	S. T. Walker, M. A.
do	Chinchuba	St. Tammany Parish	Deaf-Mute Inst. of the Holy Rosary	Sister M. Athanasia.
Maine	Portland	Spring St., Nos. 79 to 85	Maine School for the Deaf	Elizabeth R. Taylor.
Maryland	Baltimore	Hollins St., Nos. 851 to 853	F. Knapp's Institute	Wm. A. Knapp.
do	... do	McCulloh St., No. 903	St. Francis Xavier's School for the Deaf	Rev. Mother M. Joseph Hartwell.
do	... do	West Saratoga St., No. 649	Maryland School for the Colored Blind and Deaf	Lyman Steed, M. A.
do	Frederick City		Maryland School for the Deaf and Dumb	Charles W. Ely, M. A.
Massachusetts	Beverly	113 Elliot St.	New England Industrial School for Deaf-Mutes	Oakley M. Bockée.
do	Boston	Newbury St., No. 178	Horace Mann School for the Deaf	Sarah Fuller.
do	Northampton		Clarke School for the Deaf	Caroline A. Yale, LL.D.
do	Randolph	North Main St.	Boston School for the Deaf	Rev. Thomas Magennis.
do	West Medford	Woburn St., No. 93	Sarah Fuller Home for Little Deaf Children	Eliza L. Clark.
Michigan	Bay City		Bay City Day-School for the Deaf	Martha M. Hill.
do	Calumet		Calument Day-School for the Deaf	Frances Dewar.
do	Detroit	Second and Porter Sts.	Detroit Day-School for the Deaf	Gertrude Van Adestine.
do	Flint		Michigan School for the Deaf	Francis D. Clarke, M. A., C. E.
do	Grand Rapids		Grand Rapids Day-School for the Deaf	Mrs. Lou I. Sigler.
do	Ironwood		Ironwood Day-School for the Deaf	Ethel M. Marchant.
do	Ishpeming		Ishpeming Day-School for the Deaf	Katherine Fritz.
do	Kalamazoo		Kalamazoo Day-School for the Deaf	Alice M. Robie.
do	Manistee		Manistee Day-School for the Deaf	Harriet I. Sanford.
do	Marquette		Marquette Day-School for the Deaf	Maria P. Templeton.
do	Menominee		Menominee Day-School for the Deaf	Mary D. Cason.
do	North Detroit		Evangelical Lutheran Institution for the Deaf	Rev. William Gielow, B. A.
do	Saginaw		Saginaw Day-School for the Deaf	Etta E. MacFarlane.
do	Sault Ste. Marie		Sault Ste. Marie Day-School for the Deaf	Jessie L. Thew.
do	Traverse City		Traverse City Day-School for the Deaf	Caroline Shaw.

State or Territory	Town	Street or District	Official Name of School	Chief Executive Officer
Minnesota	Faribault		Minnesota School for the Deaf	James N. Tate, M. A., LL.D.
Mississippi	Jackson		Mississippi Inst. for Ed. of Deaf and Dumb	J. R. Dobyns, M. A., LL.D.
Missouri	Fulton		Missouri School for the Deaf and the Dumb	Noble B. McKee, M. A., Ph. D.
do	St. Louis	Cass Ave., No. 1849	Mater Consilii School for the Deaf	Sister M. Marcella.
do	... do	Henrietta St., No. 3435	Gallaudet School for the Deaf	James H. Cloud, M. A.
do	S. St. Louis	9801 So. Broadway	St. Joseph's Institute for the Deaf	Rev. Mother Agnes Gonzaga.
Montana	Boulder		Montana School for Deaf and Blind	L. E. Milligan, M. A.
Nebraska	Omaha		Nebraska Institute for the Deaf and Dumb	R. E. Stewart, M. A.
New Jersey	Trenton		New Jersey School for Deaf-Mutes	J. P. Walker, M. A.
New Mexico	Sante Fe		New Mexico Asylum for the Deaf and Dumb	W. O. Connor, Jr., M. A.
New York	Albany	Pine Hills	Albany Home Sch. for Oral Instr. of the Deaf	Mary McGuire.
do	Brooklyn	113 Buffalo Ave	Branch of St. Joseph's Inst. for the Improved Instruction of Deaf-Mutes	Mary A. Kennedy.
do	Buffalo	Edward St., No. 125	Le Couteulex St. Mary's Inst. for the Improved Instruction of Deaf-Mutes	Sister Mary Anne Burke.
do	Fordham	East 188th St., No. 772	Branch of St. Joseph's Inst. for the Improved Instruction of Deaf-Mutes	N. Frances O'Connor.
do	Malone		Northern New York Institution for Deaf-Mutes	Edward C. Rider.
do	New York	904 Lexington Ave	New York Inst. for Im'd Inst'n of Deaf-Mutes	E. A. Gruver, B. A.
do	... do	Washington Heights	New York Inst. for Instr. of Deaf and Dumb	Enoch Henry Currier, M. A.
do	... do	534 W. 187th St	Reno Margulies School for Children with Defective Hearing	Mrs. A. Reno Margulies.
do	... do	1 and 2 Mt. Morris Park, W	Wright Oral School	J. D. Wright, M. A.
do	Rochester	North St. Paul St., No. 945	Western New York Inst. for Deaf-Mutes	Z. F. Westervelt, LL.D.
do	Rome		Central New York Inst. for Deaf-Mutes	Edward Perkins Clarke, M. A.
do	Westchester		Branch of St. Joseph's Inst. for the Improved Instruction of Deaf-Mutes	Ellen E. Cloak.
North Carolina	Morganton		North Carolina School for the Deaf and Dumb	E. McK. Goodwin, M. A.
do	Raleigh		N. C. Inst. for the Deaf and Dumb and the Blind	John E. Ray, M. A.
North Dakota	Devils Lake		School for the Deaf and Dumb	Dwight F. Bangs.
Ohio	Ashtabula	Division Street	Ashtabula Day-School for the Deaf	Mrs. Rosa Keeler.
do	Cincinnati	Grand and Morris Sts	Miss Breckinridge's School	Mary S. Breckinridge.

do	... do	East Sixth St.	Notre Dame School for the Deaf	Sister Mary of the Sacred Heart.
do	... do	719 West Sixth St.	L. S. Fechheimer Sch. for Promotion of Speech and Hearing	Virginia A. Osborn.
do	Cleveland	1304 Willson Ave.	Cleveland Day-School for the Deaf	Grace C. Burton, M. A.
do	Columbus		Ohio Inst. for the Education of Deaf and Dumb	J. W. Jones, M. A.
do	Dayton	1st and St. Clair Sts.	Dayton School for the Deaf	Nannie C. Kennedy.
do	Elyria		Elyria School for the Deaf	Harryette A. Maxted.
Oklahoma	Guthrie		Oklahoma Institute for the Deaf and Dumb	R. N. Dunham.
Oregon	Salem		Oregon School for Deaf-Mutes	Edward S. Tillinghast, B. A.
Pennsylvania	Edgewood P'k.		West. Penna. Inst. for the Instruction of the Deaf and Dumb	William N. Burt, M. A., Ph. D.
do	Philadelphia	Belmont and Monument Aves.	Home for the Training in Speech of Deaf Children before they are of School Age	Mary S. Garrett.
do	... do	Mount Airy	Pennsylvania Institution for the Deaf and Dumb.	A. L. E. Crouter, M. A., LL.D.
do	Scranton		Pennsylvania Oral School for the Deaf	Kate H. Fish.
do	Swarthmore	Chester R'd and Ogden Ave.	Washington Heights School for Children with Defective Hearing	Mrs. J. Scott Anderson.
Rhode Island	Providence	520 Hope St.	Rhode Island Institute for the Deaf	Edwin G. Hurd, M. A.
South Carolina.	Cedar Spring		S. Carolina Inst. for the Education of the Deaf and the Blind	Newton F. Walker.
South Dakota	Sioux Falls		South Dakota School for Deaf-Mutes	Dora Donald.
Tennessee	Knoxville		Tennessee Deaf and Dumb School	Thomas L. Moses.
Texas	Austin		Deaf, Dumb and Blind Inst. for Colored Youth	V. D. Lane.
do	... do		Texas Deaf and Dumb Asylum	N. A. Cravens.
Utah	Ogden		Utah State School for the Deaf and Dumb	Frank M. Driggs.
Virginia	Staunton		Virginia School for the Deaf and the Blind	William A. Bowles.
Washington	Vancouver		Washington School for Defective Youth	Thomas P. Clarke.
West Virginia.	Romney		West Virginia School for Deaf and Blind	James T. Rucker.
Wisconsin	Antigo		Antigo Day-School for the Deaf	Blanche E. Argyle.
do	Appleton		Appleton Day-School for the Deaf	Hannah I. Gardner.
do	Ashland		Ashland Day-School for the Deaf	Margaret Clowry.
do	Black R'r F'lls.		Black River Falls School for the Deaf	Mary Zassenhaus.
do	Bloomington		Bloomington Day-School for the Deaf	Katharine F. Reed.
do	Delavan		Wisconsin School for the Deaf	E. W. Walker.
do	Eau Claire		Eau Claire Day-School for the Deaf	Jennie C. Smith.
do	Fond du Lac		Fond du Lac Day-School for the Deaf	Anna Sullivan.
do	Green Bay		Green Bay Day-School for the Deaf	M. Stella Flatley.

State or Territory	Town	Street or District	Official Name of School	Chief Executive Officer
Wisconsin	La Crosse		La Crosse Day-School for the Deaf	Mrs. Elizabeth H. Irish, B. A.
do	Marinette	Main St., No. 1532	Marinette Day-School for the Deaf	Margaret M. Sullivan.
do	Milwaukee	Seventh and Prairie Sts	Milwaukee Public Day-School for the Deaf	Frances Wettstein.
do	New London		New London Day-School for the Deaf	Alice Jenkins.
do	Oshkosh		Oshkosh School for the Deaf	Anna Nugent.
do	Platteville		Platteville Day-School for the Deaf	Matild Flatley.
do	Racine		Racine Day-School for the Deaf	Katherine Grimes.
do	St. Francis		St. John's Institute for Deaf-Mutes	Rev. M. M. Gerend.
do	Sheboygan		Sheboygan Day-School for the Deaf	Etta M. Golden.
do	Sparta		Sparta Day-School for the Deaf	Charlotte Shermer.
do	Stevens Point		Stevens Point Day-School for the Deaf	Carrie H. Archibald.
do	Wausau		Wausau Day-School for the Deaf	Margaret Hurley.
do	West Superior		Superior Day-School for the Deaf	Delia C. Page.

CANADIAN SCHOOLS.

Manitoba	Winnipeg		Manitoba Deaf and Dumb Institution	D. W. McDermid.
New Brunsw'k.	St. John	Lancaster Heights	New Brunswick School for the Deaf	J. W. Hansell.
Nova Scotia	Halifax		Halifax Institution for the Deaf and Dumb	James Fearon.
Ontario	Belleville		Ontario Institution for the Deaf and Dumb	C. B. Coughlin, M. D.
Quebec	Montreal	St. Denis St., No. 595	Catholic Female Deaf and Dumb Institution	Sister Mary Albine.
do	... do	Ville St. Louis, N. Montreal	Catholic Male Deaf-Mute Inst. for the Province of Quebec	Rev. J. M. Cadieux, C. S. B.
do	... do	Notre Dame de Grace St	Mackay Inst. for Prot. Deaf-Mutes and Blind	Mrs. H. E. Ashcroft.

SCHOOLS FOR THE [illegible] MEANS OF INSTRUCTION

IN

THE UNITED S[illegible]

Arranged alphabetically by location	S in lroom S side	88 in Schoolroom 888 outside	888 in Schoolroom 888 outside	Unclassified
S. D. Sioux Falls School		—	18	—
Tenn. Knoxville School (2		—	—	—
Tex. Austin School (for		—	—	—
" Austin School (for		—	—	—
Utah. Ogden School (24)		9	—	—
Va. Staunton School (2		—	—	—
Wash. Vancouver School		17	—	—
W. V. Romney School ...		—	—	—
Wis. Antigo School		—	—	—
" Appleton School ..		—	—	—
" Ashland School ..		—	—	—
" Black River Falls S		—	—	—
" Bloomington Schoo		—	—	—
" Delavan School ...		15	—	—
" Eau Claire School.		—	—	—
" Fond du Lac Schoo		—	—	—
" Green Bay School.		—	—	—
" La Crosse School .		—	—	—
" Marinette School .		—	—	—
" Milwaukee School		—	—	—
" New London Schoo		—	—	—
" Oshkosh School ..		—	—	—
" Platteville School		—	—	—
" Racine School		—	—	—
" St. Francis School		—	—	—
" Sheboygan School		—	—	—
" Sparta School		—	—	—
" Stevens Point Sch		—	—	—
" Wausau School...		—	—	—
" West Superior Sch		—	—	—
Number of pupils in 139	.0	1165	1264	—
Percentage " "		9.8	10.6	—
CANADA				
Man. Winnipeg School		—	—	—
N. B. St. John School..		—	—	—
N. S. Halifax School ..		—	—	—
Ont. Belleville School .		—	—	—
P. Q. Montreal:		8	—	—
" Denis St. Sch		—	—	—
" Mile End Sch		—	34	—
" N'tre D'me de				
		8	34	—
Number of pupils in 7 sc		1.1	4.5	—
Percentage " "				

For General Su[illegible]

TABLE III.—SPEECH-TEACHING IN AMERICAN SCHOOLS FOR THE DEAF.—MARCH 12, 1907.

General Summary	United States		Canada	
	No. of Pupils	Per cent of Pupils	No. of Pupils	Per cent of Pupils
Total Pupils	11870	100.0	756	100.0
Taught Speech	8320	70.1	421	55.7
Not taught Speech	3550	29.9	335	44.3
Taught Speech:				
Speech used as means of instruction	7852	66.1	301	39.8
Speech not used as means of instruction	378	3.2	120	15.9
Not stated (whether used or not)	90	0.8	—	—
Speech used as means of instruction:				
In Schoolroom— Outside—				
S ... S	2359	19.9	246	32.5
S ... SS	37	0.3	—	—
S ... SSS	2671	22.5	13	1.7
SS ... SS	356	3.0	—	—
SS ... SSS	1165	9.8	8	1.1
SSS ... SSS	1264	10.6	34	4.5
Unclassified ... SSS	—	—	—	—

Symbols employed in above Table:

S Speech (*no Spelling, no Sign-language*).
SS Speech and Spelling (*no Sign-language*).
SSS Speech, Spelling, and Sign-language.

TABLE IV.—SPEECH-TEACHING IN AMERICAN SCHOOLS FOR THE DEAF.—MARCH 12, 1907.

Means of Instruction in School and Outside (See diagrams, pp. 270 and 271)			United States		Canada	
			No. of Pupils	Per cent	No. of Pupils	Per cent
Diagrams	Schoolroom S	Outside S				
Line 4		Total S ...	2359	19.9	246	32.5
	S	SS				
	SS	SS				
Line 5		Total SS ..	393	3.3	—	—
	S	SSS				
	SS	SSS				
	SSS	SSS				
	Unclass.	SSS				
Line 6		Total SSS.	5100	42.9	55	7.3

TABLE V.—SPEECH-TEACHING IN AMERICAN SCHOOLS FOR THE DEAF.—MARCH 12, 1907.

Schoolroom Usage without reference to outside instruction (See diagrams, pp. 270 and 271)			United States		Canada	
			No. of Pupils	Per cent	No. of Pupils	Per cent
Diagrams	Schoolroom S	Outside S				
	S	SS				
	S	SSS				
Line 7		Total S ...	5067	42.7	259	34.2
	SS	SS				
	SS	SSS				
Line 8		Total SS ..	1521	12.8	8	1.1
	SSS	SSS				
	Unclass.	SSS				
Line 9		Total SSS.	1264	10.6	34	4.5

Symbols employed in above Tables:

S Speech (*no Spelling, no Sign-language*).
SS Speech and Spelling (*no Sign-language*).
SSS Speech, Spelling, and Sign-language.

The above statistics (Tables II, III, IV, and V) have been compiled from replies to the following queries:

Query 1. SPEECH (without spelling or sign-language) used both in the school-room and outside, with.....pupils.

Query 2. SPEECH (without spelling or sign-language) used in the school-room; but SPELLING (without sign-language) also used outside in chapel exercises, work-shop instruction, etc., with.....pupils.

Query 3. SPEECH (without spelling or sign-language) used in the school-room; but SPELLING and SIGN LANGUAGE also used outside in chapel exercises, work-shop instruction, etc., with.....pupils.

Query 4. SPEECH and SPELLING (without sign-language) used both in the school-room and outside, with.....pupils.

Query 5. SPEECH and SPELLING (without sign-language) used in the school-room; but SIGN-LANGUAGE also used outside in chapel exercises, work-shop instruction, etc., with.....pupils.

Query 6. SPEECH, SPELLING, and SIGN-LANGUAGE used both in the school-room and outside, with.....pupils.

Query 7. Number taught ARTICULATION without speech being used as a means of instruction (their general education being carried on by silent methods).....pupils.

Query 8. Number taught by silent methods alone, without being taught articulation or speech.....pupils.

Query 9. Number of pupils in this school March 12, 1907: Total, ...pupils.

NOTES.

(1) Talladega School (Ala.): Mr. J. H. Johnson, the Principal, writes: "We have six classes taught orally; nine classes taught manually. Signs used in chapel and on grounds."

(2) Berkeley School (Cal.): The figures given in answer to the queries were: 1, 0; 2, 0; 3, 0; 4, 0; 5, 0; 6, 115?; 7, 115; 8, 33; 9, 148.

(3) Oakland, Seventeenth and West Sts., School (Cal.): Statistics from the ASSOCIATION REVIEW of June, 1906. [Reply received too late for use in the tables, gives the number of pupils in this school, March 12, 1907, as 13, all entered under query 1.]

(4) Hartford School (Conn.): Dr. Job Williams, the Principal, writes: "Of the 86 pupils classed under question No. 3, some use signs freely, some use them very little. The same is the case with spelling. Of those classed under question No. 6, many use not a little speech and lip-reading in the class-room and outside. Much of the school work in all classes is in writing. In our chapel exercises signs and spelling are freely used."

(5) and (6) Washington, Gallaudet College and Kendall School (D. C.): Statistics compiled from the statistics given in the American Annals of the Deaf, of January, 1907.

(7) Cave Spring School (Ga.): Mr. W. O. Connor, the Principal, reports 150 white and 40 negro pupils. He writes: "The negroes are not included in the above statistics. About 60 per cent. of our pupils are in the Oral department (we have 6 oral teachers), and I suppose we come about as near teaching *without* signs—I call them, "gestures" the pure oralists call them—as is done anywhere else. I have never seen a deaf child taught without signs and never expect to."

(8) Chicago, S. May St. School (Ill.): Miss Margaret Cosgrove, the Superintendent, writes: "The Combined Method is used in this school. Oral

and written language are used during class hours. The sign-language is used outside school hours."

(9) Chicago, McCowen Oral School (Ill.): Miss Cornelia D. Bingham, the Director, writes: "These are children between the ages of two and five."

(10) Olathe School (Kan.): Mr. H. C. Hammond, the Superintendent, writes: "I shall have to put the most of our pupils who are orally taught opposite your question No. 6, because, absolutely and strictly speaking, we *do* use the sign-language in the school-room when we are up against it, but we do *not* expect to use it in the school-room in those classes unless it is absolutely necessary. We have several classes where the sign-language, as a language, is not used, and yet where a single sign to help one over a difficulty *is* used. Now, with this explanation, I will place all our orally taught deaf opposite your question No. 6. Those taught articulation without speech being used as a means of instruction—that is, articulation taught as an accomplishment, question No. 7—I shall this year have to answer with a zero."

(11) Portland School (Me.): Miss E. R. Taylor, the Principal, reports 92 pupils under query 6, but alters it to read Speech, Spelling, and Signs, instead of Speech, Spelling, and Sign-Language.

(12) Baltimore, Hollins St. School (Md.): Statistics from the ASSOCIATION REVIEW of June, 1904. [Reply received too late for use in these tables, gives the number of pupils in this school, March 12, 1907, as 22, all entered under query 1.]

(13) Frederick School (Md.): Dr. Chas. W. Ely, the Principal, writes: "The sign-language and spelling are used in the chapel exercises. Pupils who can speak are encouraged to do so out of school as well as in, and many take great pleasure in it."

(14) Flint School (Mich.): Statistics from the ASSOCIATION REVIEW of June, 1906. See Note (11), page 282, of that number.

(15) Ishpeming School (Mich.): Statistics from the ASSOCIATION REVIEW of June, 1906.

(16) North Detroit School (Mich.): Rev. Wm. Gielow, the Superintendent, writes: "Signs are used by the teacher in explaining ideas when pictures or other action work cannot be brought into play. The meaning grasped, it is to be expressed by the spelled or spoken word."

(17) Faribault School (Minn.): The figures given in answer to the queries were: 1, 0; 2, 0; 3, 109; 4, 0; 5, 0; 6, 0; 7, 0; 8, 167; 9, 276. Dr. J. N. Tate, the Superintendent, writes: "We have sixty pupils in the primary and ten in the intermediate oral grades to whom an occasional sign is given and an occasional word is spelled. We have thirty-nine pupils in the intermediate and advanced oral grades, in teaching whom more signs and spelling are used. In teaching the one hundred and sixty-seven pupils in the manual department, March 12th, signs are discouraged and spelling and writing are used in the class-room. In our chapel and out of school, signs and spelling are used. You are at liberty to classify our pupils as you choose, since you understand the modifications."

(18) Jackson School (Miss.): Dr. J. R. Dobyns, the Superintendent, reports the number of pupils in school March 12th as 124. He gives no statistics of speech teaching. He writes: "As we use spelling with all the children in school and out and occasionally a sign to explain the word, even in the oral classes, I can not answer the above." Statistics from the ASSOCIATION REVIEW of June, 1905.

(19) Trenton School (N. J.): Mr. John P. Walker, the Superintendent, writes: "I observe that in my purest oral classes there is occasional use of gesture; so that much as I would like to say that we were teaching them all successfully by pure oral methods, I am obliged to report as within."

(20) Albany School (N. Y.): Statistics from the ASSOCIATION REVIEW of June, 1906. See note (15), page 282, of that number.

(21) Columbus School (Ohio): Mr. J. W. Jones, the Superintendent, writes: "Manual language used in a limited way in some oral schools."

(22) Salem School (Oregon): The figures given in answer to the queries were: 1, 0; 2, 0; 3, 0 (strictly speaking); 4, 0; 5, 43; 6, 0*; 7, 0; 8, 29; 9, 72. Mr. E. S. Tillinghast, the Superintendent, inscribes the following foot-note: "* Some of the oral teachers use signs, mostly natural gestures to a limited extent."

(23) Knoxville School (Tenn.): Mr. Thos. L. Moses, the Superintendent, writes: "Your No. 3 practically covers the case with our five orally taught classes, though a word may be sometimes spelled and sometimes an idea is given by a natural sign. Your No. 8 comes nearer covering the case with manually taught pupils than any other, though the manual teachers frequently resort to speech with the pupils and sometimes require it of them."

(24) Ogden School (Utah): Mr. Frank M. Driggs, the Superintendent, writes: "Ninety per cent. of our pupils are taught speech. Seventy per cent. are oral pupils. Sixty per cent. are taught wholly by oral methods. Thirty per cent. are taught by writing and spelling. Spelling is used in the chapel and in the shops, but not to the total exclusion of the sign-language. Signs are not used in the class-rooms. The advanced oral and manual pupils recite and study together where speech, spelling, and writing are the means of communication."

(25) Staunton School (Va.): Mr. W. A. Bowles, the Superintendent, writes: "The heads of our shops are, for the most part, *deaf*, and this makes a classification which would not otherwise exist."

THE SIGN-LANGUAGE IN AMERICAN SCHOOLS.

OLOF HANSON, SEATTLE, WASHINGTON.

The following statistics, showing the number of pupils in schools which do, and which do not, recognize and use the sign-language, have been compiled from the Annals for January, 1907, in the same manner as in former years.

In the Annals the various schools are recorded according to methods of instruction used as Combined, Oral, Manual, Manual Alphabet, and Oral-Manual Alphabet. The Combined System schools employ all methods that have been found advantageous in educating the deaf, many of the pupils being taught entirely by speech in the class-room; but it is generally understood that all or nearly all the schools reported in the Annals as Combined recognize and use the sign-language for chapel services, public addresses, lectures, etc., although in many of them it is restricted in or even excluded from the class-room. The Manual schools are similar to the Combined, except that for lack of means or other untoward circumstances, they are unable to give instruction in speech. Manual Alphabet schools use the manual alphabet, but reject the sign-language in and out of the class-room. Those recorded as Oral schools are supposed to exclude both the sign-language and the manual alphabet, although in point of fact this is not strictly the case in some of them. Those classed as Oral-Manual Alphabet are understood to use the Oral and Manual Alphabet methods in separate departments and to exclude the sign-language. The Pennsylvania Institution at Mt. Airy is the only school in the United States at present in this class.

Tabular statement of sign-language in American schools for the deaf from 1900 to 1906 inclusive:

Dates	Sign Language used		Manual Alphabet, but no Sign Language		No Sign Language; no Manual Alphabet		Totals	
	Pupils	P't'ge	Pupils	P't'ge	Pupils	P't'ge	Pupils	P't'ge
1900, Nov. 10..	8645	81.5	196	1.9	1767	16.6	10,608	100
1901, Nov. 10..	8967	81.3	211	1.9	1850	16.8	11,028	100
1902, Nov. 10..	8839	80.7	209	1.8	1904	17.5	10,952	100
1903, Nov. 10..	9048	80.6	210	1.9	1967	17.5	11,225	100
1904, Nov. 10..	9066	80.1	208	1.8	2042	18.1	11,316	100
1905, Nov. 10..	8983	79.2	216	1.9	2145	18.9	11,344	100
1906, Nov. 10..	9227	79.2	198	1.7	2223	19.1	11,648	100

THE INSTITUTION PRESS.

REPORT OF THE GEORGIA SCHOOL TRUSTEES—AFTER AN INSPECTION OF REPRESENTATIVE SCHOOLS— IN FAVOR OF THE ORAL METHOD.

To the Board of Trustees, Gentlemen:

In order to direct more intelligently the policies and methods of the Georgia School for the Deaf, so as to keep it abreast with the best that is being done for the Deaf in other Institutions, we, representing the Executive Committee, have made an investigation of the plans followed and the results obtained in a few similar Institutions. Those selected were the National College at Washington, D. C., the Pennsylvania School for the Deaf at Philadelphia, the Deaf School on Lexington Ave., New York City, and the Horace Mann School for the Deaf in Boston, Mass. These were chosen because of the fact that they were pioneers, in this country, in the movement to substitute oral speech for the sign language. These we visited during the first half of this month. We entered their various class rooms and witnessed actual instruction to children of various ages. We also sought out graduates from these schools who had gone out into the business and social world and were making their way successfully in competition with their more fortunate fellows.

While seeking information of any sort that could bear on the management of Deaf Schools, the special object of our inquiry was to find the actual results obtained in training entirely deaf children in the art of Speech and Lip-reading, and the best manner of obtaining it. We were seeking to find what the average normal deaf child could do in the way of communicating with hearing people and with each other by speech.

Our conclusion is that normal deaf children are taught to speak as clearly as hearing children, though not so euphoniously, and that they learn to read quite readily and accurately the lips of those they are accustomed to, and that they can, by asking for repetitions of some words, carry on a conversation without the use of signs or pencil. We saw at one place four ladies, entirely deaf, converse intelligently and happily by reading each others' lips, not a word being signed or spelled. We saw at another place the Superintendent converse with several boys, perfectly deaf, who talked to him with articulation entirely distinct and in tones not unpleasant, while they understood his words by observing the movements of his speech organs, asking him for an occasional repetition. We saw at another place, a teacher converse with a class of fifteen year old boys and girls, and among other things, discuss with them the contents of the morning paper. The conversation was general, thoroughly interesting to them and to us, all of the children were induced to talk, and the most of them used voices that were not unpleasant. There was not a sign used and only an occasional word spelled, and the teacher repeated only a few of the sentences used during the lesson.

We found in the Pennsylvania School, which for many years used conventional deaf-mute signs in the instruction of all its classes, that now of the five hundred pupils in attendance, all of them, except thirty, are being taught by the speech method, the thirty being defective in vision or health or mentality. We conversed with quite a number of teachers who had taught in Deaf Schools, using conventional deaf-mute signs, and who had also taught in schools that forbade the use of these signs. These teachers were invariably sure that the minds of deaf children were more active and better developed in the Oral Schools.

We found in schools using the Combined method of signs and speech, that the pupil was but a few minutes in the day in the actual exercise in using speech, at least 95 per cent of his converse during the day being by signs, most of the signs conventional, and utterly unknown to the world at large.

Our conclusion is clear that a competent, faithful teacher can train the average deaf child to speak and write the English language clearly and in correct form, and to understand the spoken words of another by observing the movements of his vocal organs.

Our conclusion is also clear, that this result can be obtained more surely and speedily when pupils are not taught manual signs for words, and are made to rely entirely on speech and natural gestures. We are also clear that a deaf child, trained to speak the English language, can learn to write and to enjoy its literature to a greater degree than those habituated to signs used only by deaf mutes.

The whole case between the two methods, sign and oral, may be summed up by the simple question as to whether it is better to teach a child a language that can be understood by those among whom it must live, or to teach it a foreign language. The latter is what is being done by all institutions that teach only [chiefly] the sign-language to deaf children. It is the serious and deliberate conclusion of your committee that our Superintendent should be upheld in his efforts to bring the Georgia School, as rapidly as is consistent with its condition and resources, to an exclusively oral method of teaching, or as nearly so as the good of its pupils may require.

We should also express to you the obligation we feel for courtesies extended to us, especially by the officers of Gallaudet College at Washington, by Supt. Crouter of the Mt. Airy School, by Supt. Gruver of the Lexington Ave. School, New York, and Miss Sarah Fuller of the Horace Mann School, of Boston.

J. C. HARRIS,
WM. BRADFORD.

June, 1906.

—[The School Helper (Ga.).]

IS THE COMBINED SYSTEM DOOMED?

Is it evolution, or mere revolution, that such a supposedly rock-ribbed, impregnable stronghold of combined system methods as the Georgia school is to be brought to an exclusively oral method of teaching, as rapidly as is consistent with its condition and resources? In the average combined system school is there not far too great a disparity between the percentage of deaf taught speech and speech-reading, as indicated by the statistics published in the Annals, and the percentage of pupils (exclusive of semi-mutes) who actually acquire the speech habit and fair ability to read the lips? Is the combined method fundamentally illogical from the foundation up so far as successful speech work is concerned? Is it a necessary but comparatively temporary compromise of opposing forces, based not upon fundamental truth, but largely upon practical conditions which render any sudden radical change of methods impossible?

Our experience and observation has been almost wholly confined to combined system schools. We began the study of the education of the deaf in every way predisposed, we might almost say prejudiced, in favor of the sign language and manual methods. But the more we study and the more we observe the more difficult it appears to justify the combined methods of instruction as usually applied, either upon sound principles of pedagogy, or solely by the excellence of the results secured. What Principal Blattner cautiously remarks in a recent issue of the Lone Star seems to us pretty nearly indisputable fact: "As long as the atmosphere of a school is manual, efforts at teaching a portion of the pupils speech are . . . we had almsot said futile." If so "futile," why make them at such great expense of energy, time, and money? Does not the logic of the situation demand that we either abolish such futile efforts, or else the conditions which render them futile? In either event the combined method must go, and practically pure oral

schools, or entirely separate oral and manual schools, or departments, result.—[E. S. Tillinghast in the Oregon Outlook.]

Our friend of the Outlook has taken a remark we made in a recent issue of this paper out of its setting, and the bald statement he attributes to us is likely to give the casual reader a misconception of our meaning. We did not in that article advocate the absolute abandonment of manual methods. It has invariably been our contention that such a course would be impracticable, as there will always be some deaf who, on account of some physical or mental deficiency or inadaptability, can not be successfully taught by the oral method; then where compulsory education does not exist and parents and guardians may do as they please about sending their deaf child to school, there will always be some who reach the school so old that they do not remain long enough to accomplish much at acquiring speech, and their limited time had best be devoted to the three R's manually. On the other hand, we believe that, in order to secure the best possible results in speech teaching, the manual and oral pupils should be entirely separated; indeed, we believe, and the results generally will bear us out in such belief, that efforts at teaching practical speech to deaf children who are surrounded by a manual atmosphere are not very fruitful. We will go further and declare that our observation and experience, saying nothing about theory or what some might call "sound principles of pedagogy," justify the belief that such efforts are wellnigh futile. This is pretty strong language, and it is language, to be frank, that can but indict the wisdom of those of us who have been laying and extending the foundations of our educational system, whether they builded thoughtlessly, or upon a mistaken theory, or with a view to economy. The time is coming, if it has not already arrived, when we as a profession will have to retrace our steps on this question and separate the two classes during their scholastic and plastic period. The combined system, as at present generally understood and practised, is doomed. The manual method and the oral method will live. They are sound, based upon human needs and experience. The above is our position and has been so for years.—[J. W. Blattner in The Lone Star (Tex.).]

"UP HILL BUSINESS."

In a recent issue of the Lone Star Weekly, our Texas editor and friend has something to say regarding the atmosphere of a school where combined methods are employed. He speaks of the trials and troubles encountered to get good oral work when a manual atmosphere exists, and finally winds up his train of thought by saying that it is "up hill business." Surely, Brother Blattner, you are just right, but my, what a fine view you will have when you get to the top of the hill! We, those of us who were once boys, realize how hard it is to climb up the hill and pull the sled, but my, oh my! what jolly sport awaits us when we have reached the summit! If Brother Blattner succeeds, and we know he will, in clearing the atmosphere down in Texas, the results will be great enough to repay him for all the "up hill business." Now, we don't want to be misunderstood. We do not expect that our worthy friend is going to pitch in and perform this feat all at once, neither do we expect to see him eliminate signs from all quarters of his little world without strenuous efforts and lots of time, but we do look to see him gradually breathe into his institution influence enough to gradually bring into use in every schoolroom, for communication between pupil and teacher and pupil with pupil, speech, writing, and spelling. Then we anticipate that this step will lead him on until the whole atmosphere of his instituton is so filled with the English and speech idea that signs will do no harm to the further development of the pupils.—[Frank M. Driggs in The Utah Eagle.]

THE MANUAL ATMOSPHERE.

"As long as the atmosphere of a school is manual," says the Lone Star, "efforts at teaching a portion of the pupils speech will be uphill business,"

and therein is stated a great truth. Signs are very, very easy to use, and children are not readily persuaded to practice a method of communication that is slow, uncertain, and difficult when a quick, definite, and easy way is literally at hand. Even manual spelling has little attraction for them when a few signs will do the work. When a pupil has something to say, it is not for the sake of practice in English, nor is he apt to consider the latter of sufficient importance to justify itself. So it may be set down as a truism that if signs are allowed in any degree, they will be the preferred means of communication to the almost total exclusion of others, and English will be used, if at all, only when signs fail. As for speech and speech-reading—they will be a negligible quantity so far as the pupils talking with each other is concerned.—[Edward J. Hecker in The Silent Hoosier (Ind.).]

THE NORTH CAROLINA SCHOOL TAKES ANOTHER FORWARD STEP.

The policy of our school has always been to discourage the use of signs in the class-room. In a Combined school it is next to the impossible to eradicate them, especially outside of the school-room, where the manual and oral pupils are thrown together as they are with us.

Mrs. Hurd, who was at the head of our oral work for ten years, had her righteous soul vexed from day to day in the struggle to combat this enemy to *speech* and *speech-reading*. Mr. Archer, now our educational head, is confronted with the same thing.

At the close of the teachers' association last Monday Mr. Archer brought before the meeting the use and the abuse of signs. After some discussion it was agreed, that, so far as school-room work goes, neither signs nor spelling are permissible in oral classes, and no signs in manual classes.

The Superintendent followed this up, the next day, by an interview with each teacher and class to the effect, that hereafter all communication between teacher and pupils and between pupils themselves, must be by speech and speech-reading in the oral classes and by spelling and writing in the manual. It is the intention to discourage the use of signs outside the school-room and to encourage, in every way possible, the use of spoken English among the oral and of spelling among the manual.

Every experienced and successful teacher in oral work will agree that speech and speech-reading come only by practice, practice, drill, drill in *speech* and *speech-reading*. Both the deaf teacher and the hearing will also agree that in the manually-taught classes the best English is gotten by the constant practice of spelling and written language. Even when these means are conscientiously and persistently used, still the work of getting speech and accurate English is a difficult task.—[Mrs. L. A. Winston in the Deaf Carolinian (N. C.).]

THE RAISING OF THE STANDARD AT GALLAUDET COLLEGE.

Some time ago we received a letter from Dr. Gallaudet stating that it was the desire to raise the standard of admission to the college, the purpose being to make the requirements those heretofore existing for entrance into the Freshman year. In this communication the Doctor asserted that while educational standards had been raised in schools and colleges generally those at Gallaudet College had remained practically the same. We fear that he rather overstated the facts with reference to the former and hardly gave his own school due credit for the progress it has made. There have been changes in the curriculum of our colleges and universities, but that the leading colleges of the country have materially raised their standards can hardly be said. The changes have been rather in the direction of specializing than toward making courses calling for particular degrees more difficult. Recently a suggestion was made, we believe by the president of Harvard, that the usual four years B. A. course might be reduced to three years.

As to Gallaudet College, we feel pretty competent to judge. For years we have received the questions for the entrance examinations and submitted

them to our pupils. These examinations, we know, are more extensive and more difficult than they were years ago. Questions in literature have been added, the examination in composition and grammar is much harder, the tests of the applicant's command of English are more exacting, and the requirements in the History of England have been increased, so that instead of stopping at Henry VII, the entire field is covered down to the present time. There has been progress, and this progress has been reflected in a raising of the standards at the elementary schools throughout the country. We have no serious objection to raising the entrance examination as indicated. Indeed, we believe it should be done, provided sufficient time is given for the various schools to adjust themselves to the change; that might require several years. Aside from this, other requirements, in our opinion, should be added. The present examinations do not include several important studies, among them being Civil Government. Under such condition, it may and perhaps does happen often that a student will go through the entire college course and take his degree without ever having studied these branches.—[J. W. Blattner in The Lone Star (Tex.).]

A SUGGESTION RELATIVE TO THE RAISING OF THE STANDARD OF ADMISSION AT GALLAUDET COLLEGE.

The question of the advisability of raising the standard of admission to Gallaudet College has, very naturally, wakened some discussion in the institution press.

The prevailing opinion seems to be that while it is "a consummation devoutly to be wished," the means for its attainment, consistently with the greatest good of the greatest number, are not immediately at hand. The principal objection seems to be the excessive length of the school life required. Would it not be practicable, in schools which contribute recruits quite largely to Gallaudet, to arrange for prospective collegians a special course, diverging from the regular course, say, three years before its completion. This course to omit much of the "general information" work, concentrating rather on the college preparatory studies. What would thus be left out is work, indispensable for those whose schooling ends when they leave the school, but such as would be insensibly acquired afterwards in the atmosphere of college. And, as none but the brightest ought to try for Gallaudet, these special students ought to be able to get a long way ahead of their average school contemporaries in their special studies—very likely, we should think, to the extent of the whole preparatory year, as at present arranged.—[Weston Jenkins in the Messenger (Ala.).]

TEACH AND USE THE ENGLISH LANGUAGE FROM THE BEGINNING.

That same old question of the sign language is up again and some hot shot is being exchanged between the combatants. We don't propose to mingle in the fray, but will sit on a fence in the middle distance and will make a few disinterested observations. The advocates of signs generally base their defense of the system on its usefulness in the case of pupils who have made so little progress in the study of language that some other medium for the expression of thought is an absolute necessity. Here, they say, no substitute for the spoken or written word is possible except the manual sign. But, they concede, when the pupil has gained a fair comprehension of alphabetic language, the sign language, like the scaffolding of a completed building, may be removed.

Now it happens that what we have seen of the instruction of the deaf leads us to very different conclusion. We have certainly seen in many different schools and under teachers of varying ability, many deaf children taught the use of English from the very bottom, without the sign language, quite as well as we have seen it done in any school by any teacher, under the sign system.—[Weston Jenkins in the Alabama Messenger.]

DEGREES CONFERRED BY GALLAUDET COLLEGE.

During its forty-three years of existence, Gallaudet College has benefited a total of 832 deaf students. Of these 222 received the degree of Bachelor of Arts; 31 that of Bachelor of Science; 21 of Philosophy, and 3 of Letters. Only 34 of these received the degree of Master of Arts, which is conferred on graduates of not less than three years' standing. Other degrees have been conferred as follows: Master of Science 2; Honorary Master of Arts 22; Bachelor of Divinity 1; Bachelor of Pedagogy 1; Doctor of Letters 5. All the above, with a few exceptions, were conferred on deaf persons.

The following degrees were conferred on hearing graduates of other colleges: Doctor of Humane Letters 9; Doctor of Philosophy 6; Doctor of Science 2; Normal. Fellows receiving the degree of Master of Arts 55. Diplomas were also issued to 20 graduates of the normal department. It is especially gratifying to the cause to note the number of deaf people who have been successful in pursuing the collegiate course.—[North Dakota Banner.]

GOOD SUPERVISORS.

Some of our smaller sister schools, among which we are numbered, have often had difficulty in filling the position of supervisor in a satisfactory manner. It has frequently been found that the one appointed to that position has failed utterly in the performance of the duties expected of him. Either in one important particular or in many, he has been unable to handle his work with any degree of satisfaction to the superintendent or pleasure to himself.

The duties of supervisor in any of the Schools for the Deaf, where he is expected to look after a hundred or more boys are many, and some of them are most trying. In the proper control and care of fifty small boys, there are problems to puzzle the wisest of heads, to say nothing of the handling and disciplining of a large number of young men who do not always take kindly to institution rule.

There are quarrels without end to settle and the offenders to be punished; petty pilfering which must be ferreted out and the wrong doers brought to justice; disobedience and rebellion on the part of the young men, in which the wrong doer must be made to bend the knee.

There is a multiplicity of duties in connection with the position of supervisor. The average small boy goes through clothes soon enough when carefully watched. What is the result when this detail is neglected? There are wet feet to be dried; sore fingers to be bound up; slivers to be extracted; to say nothing of teeth, prompt and careful attention to the bath, sorting of clothes and details without end.

He is expected to find proper and legitimate amusement for the smaller boys; to be a past master in the art of making kites; in stilt season one to be consulted with profit, and a champion in the games of tops and marbles.

The good supervisor must be a leader in the games and sports of the larger boys, and not only be able to give valuable instruction but take part in their contests.

As a disciplinarian he must be able to handle the boys under his care in a satisfactory manner without the necessity of falling back upon the superintendent, who already has duties enough.

To be successful he must have the respect of every boy in school and be able to understand the peculiar natures of the deaf.

Why then, does the supervisor so often fail, or at least prove to be only mediocre? It seems to us that the reason is near at hand and easily understood. Surely it is because so little importance is given the position and the salary attached thereto is so small. Great care is usually evinced in the selection of most other officers. There are few positions in a school which call for greater intelligence and tact than that of supervisors and perhaps none so confining.

Yet in some instances little interest is shown in filling this important position. Persons totally unfit to perform the duties required of a supervisor are taken, and the trouble resulting therefrom is often of a serious and lasting nature. Even when a really first-class man is secured, the inducements for him to remain are so small that he soon finds greener pastures. If not promoted, he leaves the institution altogether. Instead of expecting to be a permanent officer of the school and give it the benefit of his interest and best effort, he merely holds on long enough to tide himself over a difficulty, or to wait for something better. All that has been said with reference to the boys' supervisor, will apply with equal force in the case of the supervisor of the girls.

We believe that the position is an important one and that due care should be given in filling it. Special care should be given in selecting the one who is to be the out of doors teacher of all the boys in the school. He is to be with them more than half of the time for nine months each year for ten or twelve years. His teaching and example help greatly to shape their characters and mould their natures. His every act is noted and often imitated. He is a power for good if he possesses the right qualities and a power for bad if he does not possess them. There is no calling so high as the one of character building nor none so sacred. Therefore more than ordinary care should be exercised in choosing a man to fill the position, and when a good one has been found things should be made so attractive to him that he will not be anxious to give it up.—[Utah Eagle.]

THE DEAF OF PARIS.

Our readers and friends visiting Paris should not forget to call at the Mission Rooms of the Deaf, at 3, Allée des Bains, Boulevard Rochechouart. At four o'clock on a Sunday afternoon it is no uncommon sight to find from sixty to eighty persons watching the movements of M. Vigier's lips and his natural signs, by which double method every subject is conveyed to them. The great majority of our deaf friends will agree that signs probably play a far more important part in the discourse than lip-reading. This mission was started about eight years ago, by Pastor A. Vigier, who, previous to his entering the ministry of the Reformed Church, occupied the position of a professor in one of the French schools for the Deaf and Dumb, thus making himself familiar with all methods of teaching them.

France provides good schools for her 22,000 deaf young people. There are said to be about 2,000 deaf people of all ages in Paris alone, and at present the mission referred to is the only one of its kind there.—[The British Deaf Times.]

The citizens of Brantford, Ontario, are now engaged in the pleasant task of raising $40,000 for a magnificent monument to Prof. Alexander Graham Bell, who invented the telephone while a resident of the outskirts of that city. Of all modern inventions since the discovery of steam, the telephone is perhaps that in most frequent use. It has far outdistanced telegraphy in the place it occupies in the commercial world. Only in long-distance and cable work is the telegraph still supreme. Prof. Bell, as his picture shows, is not a young man, but he is not nearly so venerable as his patriarchal beard seems to indicate. He will not be sixty till next March, having been born in Edinburgh, Scotland, in 1847. He accompanied his family to Canada in 1870. The first telephone patent was granted on February 14, 1877. Prof. Bell will no doubt live to be an honored guest at the inauguration of the Telephone City's monument.—[Silent Echo (Manitoba).]

We have missed the presence of the quaintly courteous Japanese of nobility, Miss Ei Imura. She has faithfully devoted the two past years in this school to learning the method of instructing the deaf from the beginning to the end. She is at present engaged in acquiring the mastery of English. In the course of time she will travel East and onward around

the world. She may visit a number of schools for the deaf in the States and abroad. What she has learned and what she has yet to learn will bring her privileges which the Japanese government will grant. Her shortest stay in one class here was one morning in Mr. d'Estrella's. She wrote, "Much obliged to you for your kind helps. I have enjoyed very much this morning to visit your class."—[California News.]

One of the most serious faults at present, in our system for educating deaf children is that it deadens their sensitiveness to error from a schoolroom standpoint. When a child writes a sentence, he expects it to be wrong; and stands with a ready crayon to make the correction that will surely be pointed out. This is wrong. It is wrong because the force of the correction is lost. He is a "hardened criminal" in language and must remain, no matter what his surroundings may be, in the cell of grammatical errors. We do too much correcting and not enough practicing. We must not forget the character of the child.—[The Palmetto Leaf (S. C.).]

Last January Superintendent Bangs sent out about 2,000 circular letters to the teachers of the public schools telling of the school here and asking assistance in locating deaf children. About 500 replies have been received and the names of about 50 possible pupils secured. The parents of these will be written to and every effort made to verify the reports and to secure the attendance of those entitled. During the summer the present dining-room will be doubled in size and additional accommodations provided for dormitories for both girls and boys.—[North Dakota Banner.]

A new departure has been taken in our dining-room and the pupils of the oral classes have been grouped at tables by themselves, where all requests and conversation, as far as possible, are done orally. We believe in giving those pupils who have ever so little degree of speech and lip-reading every opportunity to use and improve on it. This grouping may seem a little thing, but in such an important matter every mite is a help.—[Canadian Mute (Ont.).]

Mr. A. Lincoln Fechheimer, a graduate of the Clarke School at Northampton, who later graduated from Columbia College and later from the "Ecole des Beaux Arts" in Paris, was the past year employed by a firm of architects in Chicago at a salary of $5,000 a year. This year he has taken a partner and gone into business for himself in Cincinnati.—[Massachusetts Correspondent, Catholic Deaf-Mute (N. Y.).]

The Western Pennsylvania school recently gave an oral entertainment. The paper from that school contained the program and it seems to have been quite an extensive affair. There were recitations, dialogues, letters, etc. The numbers were mostly Christmas selections. Nearly all the oral classes in the school were represented. This seems to have been a unique entertainment for a combined-system school.—[Lone Star (Texas).]

In the Annals for January, 1901, we find that fifty per cent of the pupils in our school were taught speech, but that none were taught wholly by the oral method. Since that time, six years, the number taught speech has risen to ninety-one per cent., while the percentage of those today in oral classes and educated by oral methods exclusively is sixty per cent.—[Utah Eagle.]

Mr. Teegarden has formed an English language class among the boys which promises to do good work. There are only a few members at present, but when he gets it well in hand the membership will be enlarged. The object is to use English, either orally or by spelling. It is an excellent idea and we hope it will meet with great success.—[Western Pennsylvanian.]

EDITORIAL COMMENT.

DR. BELL RECEIVES AN HONORARY DEGREE FROM OXFORD UNIVERSITY.

On May 2d, 1907, Oxford University conferred upon Dr. Alexander Graham Bell the honorary degree of Doctor of Science, this distinction being given him in recognition of his great services to the world in the invention of the telephone and in the developing and spreading of methods for giving speech to the deaf. Knowledge of this double recognition will be received with gratification by the friends of Dr. Bell everywhere, and especially by those who know of his great interest in and devotion to the deaf and the cause of their education. The linking together thus of the two services to mankind by this high scholastic authority may not have other effect than to bind them together in the minds of men and in the records of history for all time, with the result that all men who read and know things will know of Dr. Bell's work of giving speech to the deaf as a matter as familiar to them as will be the history of the electric speaking telephone, in which history indeed in its earlier chapters it will be read of as having played a no unimportant part. Oxford University, in honoring Dr. Bell in the manner that it has, honors, as it may be conceived, even more the work of the education of the deaf, and all friends of and workers in the cause recognize the honor and appreciate it.

THE STATISTICS OF SPEECH-TEACHING.

Elsewhere are presented the usual annual statistical tables of speech-teaching in America. The detail and summary tables show generally the same steady growth of the work of speech-teaching in the schools during the year as has prevailed from the time of the beginning of these records in 1899. But along with the usual moderate increase in the quantity of speech work, shown by the figures and percentages, there has, it appears, taken place an unusual change in the *character* of the speech-teaching done. This change in character will be noted in the diagrams showing the curves of

change, and in the tables of figures accompanying that the diagrams illustrate. It is sufficient here to call attention to the fact of the change, and to say that it is in effect one that indicates a marked decrease in the use of the sign-language and the manual alphabet in the school-room, and a corresponding ***marked increase in the use of speech,*** as a medium of communication and a means of instruction in the conduct of the speech work of the schools. This is most gratifying, as indicating at once both an elevation of aim in the speech work being done in our schools and a more prevalent appreciation of the requirements of that work in the employment of means fitted to it and adequate for its accomplishment.

THE SEMI-CENTENNIAL OF THE COLUMBIA INSTITUTION FOR THE DEAF AND DUMB.

The presentation day exercises of Gallaudet College, on May 1, were made doubly interesting and impressive in the fact that it was the semi-centennial anniversary of the founding of the Columbia Institution for the Deaf and Dumb, of which Gallaudet College has since 1864 formed a part. President Gallaudet and Prof. James Denison, the latter principal of Kendall School, have been associates in the work here during the entire fifty years, and their addresses were most interesting as reminiscent of their early experiences. Degrees were conferred in course upon thirteen candidates, four hearing, for the Master degree in the Normal department, and nine deaf, for the Bachelor degree in the Collegiate department. Of the latter, four delivered theses, two by speech and two in the sign-language. President Gallaudet took advantage of the occasion to make the announcement of a decision of the Board and faculty to advance the standard of admission to and of graduation from the College one year, this to be done with it in view to bring the College up to the grade and standard of colleges for the hearing. In order to give the preparatory schools of the country time to adjust themselves to the change and to advance their work to a point to meet the higher requirements, the time of the change has been set for the fall of 1909. This advancement has had, it is understood, the quite general approval of the profession, and there is no doubt but that in time our schools will be found to have responded to it by the advancement of their work to a level to meet fully the demands hereafter to be made upon it. Thus this advancement of the college

work will redound not only to the benefit of the small percentage of the deaf who take a college course, but it will benefit in equal, if not greater, measure all deaf children in the country capable of profiting by the extended privileges that will be open to them in all the schools.

CHANGES IN THE STATE LAW AFFECTING THE INDIANA SCHOOL FOR THE DEAF.

Some very radical and altogether commendable changes have recently been made by the Legislature of Indiana in the law relating to its School for the Deaf. Among them is the one by which it will hereafter be known as the "Indiana State School for the Deaf," instead of, as formerly, the "Indiana Institution for the Education of the Deaf and Dumb." Other provisions of the new law are that the governing Board shall consist of four members, not more than two of whom shall belong to the same political party; that the Superintendent shall be appointed by the trustees when there is a vacancy, and can be removed only for cause impairing faithful, efficient, or intelligent administration of the office, after trial upon written charges; that all minor officers and employees shall be appointed by the Superintendent, to be removable at his pleasure, such appointments to be made regardless of political or religious considerations, after examination under rules and regulations prescribed by the Board; and that campaign assessments of officers and employees is prohibited under penalty of fine, imprisonment, removal from office, and ineligibility to reappointment for a period of five years.

THE SAN FRANCISCO DAY-SCHOOL FOR THE DEAF AFTER THE EARTHQUAKE.

The San Francisco Day-School for the Deaf contained in March, 1906, 37 pupils. It contained in the same month this year 22 pupils. It is needless to say the decrease was due to causes incident to the earthquake and fire that destroyed the city early on the morning of April 18, 1906. But aside from the decrease in the number of pupils, which might well have been much greater, it could have been assumed that the re-establishment of the school would be attended with great and numerous difficulties, and with experiences withal well worth recording in the annals of the educa-

tion of the Deaf. The following letter to the editor, though a personal one and written without thought of its publication, is here given, in order that our readers may have now, and history may have for all time, the interesting narrative that it contains. The writer, Mrs. Jennie Bright Holden, is the principal of the school, and, if we mistake not, its founder:

DEAR MR. BOOTH:—Our school was opened July 26 [a little more than three months after the earthquake], on the sidewalk, amid the ruins. The carpenters were busy laying the floor of our portable schoolhouse. We were three days on the sidewalk and several weeks without windows; and for more than two months the only seats we had were pieces of boards on piles of brick gathered from the ruins. Now we are very cozily situated. Our friends in Wisconsin sent us $175, with which we furnished the school with books and much furniture. Our friends in Boston raised $200 for the benefit of our school, and sent us books, maps, furniture, and raffia and reed. The Board of Education has been very kind and considerate. We were obliged to drop Miss Ina Smith as teacher. Some of our pupils were scattered about, and have not yet returned. Some were obliged to move on account of business. I was fortunate in securing a position in Sacramento for Miss Smith. We lost a good deal of personal property in our school. We were located near the City Hall. We were thankful the earthquake and fire came at a time when we were not assembled in school, as our children came from the far parts of the city, and it would have been hard to have located the parents.

Sincerely yours,

JENNIE B. HOLDEN.

THE SUMMER SCHOOL.

We are glad to be able to announce that in response to the request made by the Board of Directors of the Association, a session of the Summer School will be held at Clarke School, Northampton, from June 7th to July 4th, inclusive. The work of the school will cover four hours daily, the time of the first two weeks to be divided equally between observation of the regular class work of Clarke School, and the study of methods; the last two weeks, the time to be given wholly to the study of methods. Students to be eligible to the class must have taught speech to the deaf at least one year. A certificate of attendance will be given at the close of the session. The tuition for the full term is fifty dollars. Board may be obtained not far from the school at seven and eight dollars per week, according as there may be either one or two in a room. We are informed that

the class is already full to the limit of the capacity of the school-rooms of Clarke School to accommodate it during the observation periods.

THE INSTITUTIONS FOR THE DEAF AT THE BEGINNING OF THE TWENTIETH CENTURY.

The above is the title of an exceedingly interesting and valuable chart compiled by Prof. S. Vandenbussche, Institution for the Deaf, Poitiers, France, giving in tabular form a complete list of the schools for the Deaf of the world, with in each case the location and the year of establishment. A recapitulatory table is also given showing the growth in the number of schools in the various geographical divisions of the world during the century from 1801 to 1901, by quarter century periods. This is a particularly interesting table, and we print it in order to its preservation for reference and historical uses:

	Number of Institutions in					Number of Pupils in
	1801	1825	1850	1875	1901	1901
Africa	0	0	1	2	8	127
America	0	4	14	51	143	11,989
Asia	0	0	0	0	11	453
Europe	14	60	181	271	434	25,676
Oceanica	0	0	0	3	7	332
Total	14	64	196	327	603	38,577

Copies of this chart, 24 x 30 inches in size, may be procured of the author, or through the editor of the ASSOCIATION REVIEW, at 30 cents each, or six copies for $1.50, post free.

NEW SUPERINTENDENTS.

A change of Superintendents of two schools has recently been made, Mr. N. A. Cravens, of the Austin, Texas, School, retiring to take another State office, and Miss Dora Donald, of the Sioux Falls, S. Dakota, School, resigning to return to her old place at the head of the State School for the Blind at Gary. Mr. Cravens is succeeded by Mr. J. H. W. Williams, an experienced man in the work, having been steward and teacher in the Austin School for a number

of years past, while Miss Donald is succeeded by Mr. James D. McLaughlin, of Watertown, S. Dakota, who comes to the position without experience in the work.

PROGRAMMES OF PROFESSIONAL MEETINGS TO BE HELD THE COMING SUMMER.

The following are the programmes of the several professional meetings to be held the coming summer to consider questions relating to the education and care of the Deaf:

The meeting of the Department of Special Education of the National Educational Association, at Los Angeles, July 10-12, Miss Anna E. Schaffer, of Madison, Wis., President: *Wednesday Morning,* July 10—1. The Need of a Better Understanding of the Exceptional Child—M. P. E. Groszmann, Superintendent of Groszmann School for Nervous and Atypical Children, Plainfield, N. J.; discussion—James A. Foshay, Los Angeles, Cal.; Miss Mary R. Campbell, Chicago, Ill. 2. Some of the Causes that Lead to Mental Deficiencies—Miss Mary E. Pogue, Physician in Charge of Oakleigh Educational Sanitarium, for Nervous Diseases in Children, Lake Geneva, Wis. 3. Rhythmic Exercise—Los Angeles Day School for the Deaf. 4. The Value of Rhythm for the Deaf—(speaker to be supplied). 5. Report of Commission appointed to examine into the relations existing between the educational work of the State Institutions and the State Department of Public Instruction of the different States. *Friday Morning,* July 12.—1. Self-Support—Thomas P. Clarke, Superintendent of Washington School for Deaf and Blind, Vancouver, Wash.; discussion—Frank M. Driggs, Superintendent of School for Deaf, Ogden, Utah. 2. The Object and Result of Academic Training in Schools for the Blind (to be supplied). 3. Why Wisconsin Believes in Public Day Schools for the Deaf—F. M. Jack, State Institute Conductor, River Falls, Wis. 4. A Brief Review of the Growth of Day Schools in California—Mrs. J. B. Holden, Principal of the San Francisco Day School for the Deaf, San Francisco, Cal. 5. The Training of the Incorrigible—Charles O. Merica, Warsaw, Ind.; discussion—J. P. Greeley, Superintendent of State Industrial School, Whittier, Cal.; W. A. Gates, Secretary Board of Charities and Corrections, Berkeley, Cal. 6. Round Table Conference—Leader, M. N. McIver, Superintendent of City Schools, Oshkosh, Wis. Topic: The Industrial Training of the Deaf.

The meeting of the International Conference on the Education of the Deaf, at Edinburgh, Scotland, July 29–August 2: *Monday,* July 29—Evening, Reception by the Committee of the Deaf and Dumb Institution, Henderson Row. *Tuesday,* July 30—First session, Official opening, by Thomas Shaw, Esq., K. C., M. P.; Papers by Dr. Richard Elliott and W. H. Addison, representing Great Britain. Second session, Resolutions on legislation affecting Deaf

education. Evening, Reception by the Lord Provost and Magistrates at the City Hall. *Wednesday,* July 31—Third session, Papers by G. Ferreri, Italy; A. Hanson, Denmark; A. Belanger, France. Fourth session, Joint meeting of the National Association of Teachers of the Deaf and the British Deaf and Dumb Association. Evening, Tea, attended by representatives from both Associations. *Thursday,* August 1—Fifth session, Papers by Dr. E. M. Gallaudet and Dr. A. L. E. Crouter, America. Afternoon, Excursion to the Forth Bridge. Evening, Public meeting of the Deaf. *Friday,* August 2—Sixth session, Resolutions; 11:30 to 1 o'clock, General meeting of the National Association of Teachers of the Deaf. Afternoon, Visits to places of interest in Edinburgh. Evening, Dinner by the President, Sir Henry Bemrose. The "Braidwood Medal," if won on this occasion, will be presented at the first session. Testimonials will probably be presented to Dr. Elliott, of Margate, and Mr. Smith, of Bristol, at the dinner, in recognition of their completion of fifty years' service in the education of the Deaf.

The meeting of Section IX (Special Schools for Blind, Deaf, Dumb, Crippled, and Invalid) of the Second International Congress on School Hygiene, in London, August 5-10, Rt. Hon. the Earl of Crewe, President; John T. Taylor, Esq., Chairman; B. P. Jones and Wm. Van Praagh, Hon. Secretaries. Papers for the Deaf Section: 1. Deaf-Mutism, its Diagnosis and Prevention, by Arthur Cheatle, Esq., F. R. C. S. 2. Deafness in Infancy—the Problem of the Deaf School Child, by Macleod Yearsley, Esq., F. R. C. S. 3. Educational Treatment of the Deaf in all the Stages from Impaired Hearing to the Totally Deaf, by Dr. James Kerr Love. 4. The Hygiene of the teeth and mouth in the schools for the Deaf, by G. Ferreri. 5. Defective articulation and its prevention, by Wm. Van Praagh, Esq.

A NEW SCHOOL FOR THE DEAF PROJECTED IN NEW YORK.

A meeting of prominent people was recently held in New York to consider the matter of providing increased school facilities for the deaf children, and more particularly, as is understood, the Hebrew deaf children, of the city. The meeting was presided over by Rev. Dr. H. Pereira Mendes, the leading spirit in the movement, and was addressed by Dr. E. M. Gallaudet, Prof. Enoch Henry Currier, and Prof. E. A. Gruver. It has been represented that there are large numbers of deaf children at present growing up uncared for and untaught in the congested portions of New York City, and it is the aim of this movement to gather these children into neighborhood schools, either day or boarding, or both day and boarding, and to give them educational privileges that seem not now to be theirs.

FOREIGN VISITORS.

Our American schools have been honored during the year by visits from foreign educators of the Deaf in the persons of Mr. W. H. Addison of the Glasgow Institution, Mr. Frank G. Barnes of the Homerton, London, School, and Mr. Samuel Johnson of the Adelaide, South Australia, Institution. A number of our representative schools in the East were visited by them, and Mr. Barnes extended his tour as far West as Chicago. Mr. Johnson, en route to this country, stopped in Italy, visiting some schools in that country, and on his return by way of England he gave the principal schools of that country and of Scotland and Ireland an inspection.

A meeting of the National Association of the Deaf will be held at Norfolk, Va., on the Exposition grounds, on the dates July 4 to 6. The president of the Association is Mr. Geo. W. Veditz, of Colorado Springs, and the secretary is Rev. James H. Cloud, of St. Louis. It is anticipated that there will be a large attendance of the deaf of the country and that the proceedings will be of great interest.

CALL FOR THE ANNUAL MEETING OF THE ASSOCIATION.

To the Members of the American Association to Promote the Teaching of Speech to the Deaf:

The Seventeenth Annual Meeting of the American Association to Promote the Teaching of Speech to the Deaf will be held at Norfolk, Va., on Tuesday, June 18th, 1907, at 10 o'clock A. M., in the lecture room of the Social Economy Building, on the Exposition grounds.

The special business will be the election of five directors to serve three years, in place of the retiring directors whose term expires in 1907, viz., Caroline A. Yale, Harriet B. Rogers, Edmund Lyon, Richard O. Johnson, and Job Williams.

No literary program will be presented at this meeting, and only formal business matters, including reports of officers and committees, will be considered.

For further particulars address Dr. Z. F. Westervelt, Secretary Rochester, New York.

A. L. E. CROUTER,
President American Association to Promote the Teaching of Speech to the Deaf,
Mt. Airy, Philadelphia, Pa.

Signed:
Z. F. WESTERVELT,
Secretary.

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FRANK W. BOOTH, EDITOR

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The American Association to Promote the Teaching of Speech to the Deaf.

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THE ASSOCIATION REVIEW.

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OCTOBER, 1907.

THE REAL ROMANCE OF THE TELEPHONE, OR WHY DEAF CHILDREN IN AMERICA NEED NO LONGER BE DUMB.[1]

BY FRED DE LAND.

CHAPTER XVII.

THE HORACE MANN SCHOOL.

Quite naturally the manly, earnest and persistent fighting for the welfare of the deaf that characterized Mr. Hubbard's testimony before the legislative committee in 1864 and again in 1867, attracted much attention on the part of press and of public, and won for the cause of the deaf life-long friends whose services have since proved of immeasurable value. One of these friends was the Rev. Dexter S. King. The charter of the Clarke School gave it the right to establish schools in two places besides Northampton. Scarcely was the Clarke School opened when Mr. King asked that a branch might be started in Boston. Owing to the conditions of the Clarke endowment, this request could not be granted. So Mr. King, in May, 1868, while a member of the Boston school board, secured the appointment of a committee of five members to consider the advisability of opening a school for the deaf in Boston.

An investigation was immediately started by the committee which developed the facts that there were more than fifty deaf-mute children in Boston, only twenty-two of whom received instruction in any form and that at least twenty-eight children were kept at home with no one in a position, or who was competent, to render any aid in their need and longing for an education. Then, on January 11, 1869, Mr. King asked the school board to request the city council to furnish a hall of sufficient size to enable the

[1] Commenced in the October, 1905, number.

members of the council and of the school committee, together with the friends of the deaf, to witness an exhibition of deaf-mutes from Hartford and from Northampton. This request was granted as well as his request that the committee of five be continued.

On April 13, 1869, Mr. King, for his committee, reported that a primary school for deaf-mutes "ought to be established, for the reason that there are deaf-mute children in this city entirely destitute of the means of education, sufficient in number to form a school, and whose friends would joyfully improve the opportunity of sending them to school; and on the ground of economy; the portion of State aid to deaf-mutes paid by Boston, if applied to the education of her beneficiaries alone, would be for each student more than $400 per annum. With a school in Boston, the cost for each scholar would not exceed probably $100 per annum. The committee believe that children in such a school as it is proposed to establish would be prepared, from the age of four or five years to the age of nine to ten years, to finish their education in our grammar schools. The education to be acquired by the proposed system, between the ages of five and eight years, would be equal to what would be acquired otherwise *between the ages of sixteen and eighteen years.* The committee urge that the school be made a public benefit beyond the limits of Boston, by offering its privileges to children in surrounding cities and towns for whose tuition a charge might be made of $100 per annum; but which the State would provide for in case of inability to pay on the part of parents or guardians. Children attending such a school would be supported in their own homes."

Mr. King's report was favorably received, and the school board issued four orders: (1) That a school for deaf-mutes be opened under the direction of this board, at the commencement of the next school year. (2) That a committee of seven be appointed to be styled the Committee on the School for Deaf-Mutes. (3) That the committe be authorized to engage a teacher on probation, at a salary not exceeding one thousand dollars, the term of service to commence the first of September next. (4) That there be allowed and paid a sum not exceeding three hundred dollars, to be expended at the discretion of the committee, in preparing a teacher for special work.

In the meantime, Miss Sarah Fuller, a teacher of high standing, was selected by Mr. King and the Boston school board to

serve as principal of the new school, because she appeared to possess the qualifications so essential in pioneer educational work of this character. Miss Fuller selected as her assistant, Miss Mary H. True, and these two teachers proceeded to Northampton and secured the benefit of the instruction of the deaf at the Clarke School.

At the meeting of the school board held on September 21, 1869, on motion of Mr. King "Miss Sarah Fuller was transferred from the Bowditch School to the School for Deaf-Mutes, her services commencing with the school year," and "Miss Mary H. True was appointed a teacher on probation."

October 12, 1869, on motion of Mr. King, the school board requested the city council "to furnish rooms for the school for deaf-mutes, in the building No. 5 Pemberton square, or in some other place central to the horse railroad travel of the city." Mr. King also requested "that Miss Sarah Fuller be the principal teacher in the school for deaf-mutes, and that there be appointed three assistant teachers; and that the committee on accounts be authorized to furnish such books, charts, pictures, etc., as are necessary for the use of the school for deaf-mutes."

Lack of proper class-room facilities in the central part of the city delayed the formation of the classes until November 10, 1869, when the first class was organized in the old schoolhouse on East street, and nine deaf pupils enrolled, although there were thirty-six applicants. In this school a morning session only was held. A week later an afternoon class was started with eleven pupils in the schoolhouse on Somerset street. Then in January, 1870, the two classes were transferred to more suitable and permanent quarters at No. 11 Pemberton square, and there remained until 1875. It was to this school on Pemberton square that Alexander Graham Bell came as an instructor, in April, 1871, at the request of Miss Fuller, and it was while in this old school that he was led to make the experiments in the visualizing of speech that resulted in his inventing the electric speaking telephone in Massachusetts rather than in England or in Canada.

When Mr. King passed away, the school board at its meeting held on October 10, 1871, placed on record the resolution: "That his long and faithful services in the cause of education will not be forgotten by ourselves, or by the public, whose willing servant he was. That we particularly recognize the valuable service which he rendered towards the establishment of the

School for Deaf-Mutes, which has already proved a success beyond our most sanguine expectations."

It is recorded that "this was the first school for the education of the deaf ever incorporated into the public school system." Only the pure oral method of instruction has been pursued, and "every child is taught to speak and to read the speach of others from the lips, as well as to read and understand printed language .... and recitations are conducted as in schools for hearing children." Officially stated "this school is designed to give an elementary English education, but, as a preparation for this it must first impart to pupils entering as deaf-mutes the meaning and use of ordinary language. It aims to teach all of its pupils to speak and read the speech of others from their lips." From the beginning the principal of the school has been Miss Sarah Fuller. And the remarkable success that has made her name a familiar one in educational circles in all civilized countries, proves how farsighted was the wisdom of the school board in making the appointment.

The Horace Mann school has held that "the first need of children to whom deafness comes throught illness, accident, or other causes, is a knowledge of the meaning of the various movements of the mouth during speech. Slowly, patiently, and persistently teacher and child must first take element by element and study the positions of the mouth-parts which produce it and note its appearance singly and in combination with others, then learn how to know the difference which exists between apparently similar positions." Again, it holds that "the *deaf-born* child has no conception of the sound of his own voice except through feeling responsive vibrations to it, and his only idea of the voices of others, or of any sound whatever, is through the vibrations of things he may touch. To give him a conscious knowledge of the production of voice, to help him to imitate movements of the mouth until he has a mastery of the instrument of speech, and then to lead him to unite voice and mouth positions to produce elements which form the basis of spoken language are preliminary steps in the work for little ones, whose inability to speak is simply due to the fact that they cannot hear. For the same reason the acquisition of a vocabulary is infinitely more difficult for a deaf child than for one who hears. While the hearing child is learning language without the slightest effort from listening to speech about him, as well as that addressed directly to

him, the deaf child must acquire it through careful, painstaking study." Then in this school, "the smallness of the classes" enables each pupil to "have a favorable position from which to see the mouth of the teacher and also opportunities to study the speech of several teachers." Again, it is exclusively "a common school, thereby being in direct line with the public school policy of the State. By retaining, however, its pupils throughout a longer session than that of any other day-school, it possesses many of the advantages of a home." In giving instruction in geography and similar studies, "all the recitations are conducted in the same manner that the teacher would employ in a school for hearing pupils, only it becomes necessary for each pupil to give his undivided attention to the pupil or the teacher who is speaking, in order to read the lips, or to the blackboard, if it is a written exercise."

In August, 1878, at the Columbus convention, after nearly nine years' experience, Miss Fuller said: "Congenitally deaf children differ greatly in aptness in acquiring speech, especially in the earliest years. I am not willing to admit that any deaf child whose vocal organs are unimpaired is unable to learn to speak. Time and patience seem to be all that is needed for the accomplishment of the work." And that is the keynote to the remarkable success which has attended all her efforts in behalf of the deaf. And that is Miss Fuller's belief today, after thirty-five years of service in behalf of deaf children.

At the same convention, Miss Fuller stated that a distinctive feature of the instruction of the Horace Mann School is the "separation of the congenitally deaf pupils from those who have once heard and who retain something of speech. If the children come to us with but a few single words, we think it best to place them in rooms with pupils who use speech, because by seeing that children about them speak, they are encouraged to employ the words at their command, and try to understand these words when spoken by others. We find, too, that the use of even a remnant of speech serves to recall many words and sentences which seem entirely forgotten. These pupils, at first, are taught to associate the words which they can speak with the script and printed forms in English and in phonetic symbols, and with the appearance of the teacher's mouth during the utterance of the words."

During this inception period, that is from 1868 until 1876,

Gardiner Greene Hubbard was a member of the Massachusetts State Board of Education, and during several years served as its chairman. He heartily supported the Boston workers in all that would advance the interests of the Horace Mann School, and was unceasing in his efforts to awaken a general interest in the remarkable work in which it was engaged.

When this school was first opened it was known as the Boston School for Deaf-Mutes. But on May 8, 1877, it was officially renamed the Horace Mann School for the Deaf, in honor of the liberal-minded and progressive citizen, who, far back in 1843, had recognized and promulgated the now well-known fact that rarely is there any defect in the vocal organs of deaf children, that careful training by patient teachers will enable children born deaf to converse the same as hearing children, and that as this was being done in Europe, it ought to be the approved method of instructing the deaf in this country. In this connection it is well to recall that in 1843, after returning from an inspection of the schools in Europe, Horace Mann, then secretary of the Massachusetts Board of Education, stated, in the seventh annual report of the board, that foreign methods of educating deaf children were more desirable than those in the United States. "The schools for the deaf and dumb in Prussia, Saxony, and Holland, seem to me decidedly superior to any in this country. The point of difference is fundamental. With us, the deaf and dumb are taught to converse by signs.... As soon as he (the deaf-mute) passes out of the circle of those who understand the language of signs, he is as helpless and as hopeless as ever.... There, incredible as it may seem, they are taught to speak with the lips and the tongue."

A writer in the *North American Review* for October, 1844, in a caustic review of Mr. Mann's report, concludes that "on the whole, we see no present prospect, that the teaching of articulation will be introduced into our institutions at all; and that exercises in it ever will be made general, we cannot believe."

A year after the school had received its new name, an effort was made to have the words "for the deaf" dropped from the title, and let it read simply the "Horace Mann School." But after several discussions the school board decided that "the present name is satisfactory to those most interested in the school itself, and that the words 'for the deaf' are of an advantage to an understanding of the special object of its teaching," and no change was made.

The quarters the school occupied in Pemberton square becoming too small for the rapidly growing classes, an additional room was provided on March 12, 1872. The following year the necessity of more suitable quarters by reason of continuous growth and ever-expanding influence, became so apparent that a movement was started that brought about the removal of the school to the more conveniently arranged building on Warrenton street, in September, 1875. In five years the school had outgrown this building, but here it was destined to stay for the long period of fifteen years, though in July, 1879, an effort was made to remodel the building to meet the needs of the increasing number of pupils.

On November 11, 1879, the school board recorded that "the number of scholars in the Horace Mann School had increased steadily from year to year, and already the present accommodations are insufficient, although ample when the building now occupied was fitted for the use of this school in 1875. The natural and evident desire of the parents of deaf children to keep them under parental care and in the companionship of their hearing brothers and sisters, provided they can obtain for them the special instruction they need, is sufficient ground for predicating a continued increase in the school; and the committee are therefore of the opinion that it would be advisable to consider, without delay, plans for such increase of accommodations as may provide for the growth of the school for some years to come, though they doubt whether it will be practicable to secure such provision in the present location."

On November 25, it was decided best not to attempt to remodel the old building, and there the matter rested until April 12, 1881, when another effort was made to secure more suitable rooms. After much discussion it was decided, on December 13, 1881, that it was "inexpedient to take action at the present time." The next move to "provide more suitable accommodations" is recorded on February 26, 1884, and a year later the school board "ordered that a building be erected on a site to be given by the State." The necessary land on Newbury street was presented by the Commonwealth on April 29, 1885. On January 26, 1886, the school board requested the city council "to erect a school building, and to appropriate $40,000 for that purpose," and the following October $15,000 more was asked for.

While the construction of the new school building was under way, further delay was caused through failure on the part of the contractors. So on October 25, 1888, the school board granted the use of two unoccupied rooms in the Appleton street primary school-house to the Horace Mann School. Meanwhile the new building having been completed, the school board took possession in April, 1890, and the classes moved in in June, 1890. This handsome structure, on the construction and furnishing of which the municipality expended more than $90,000, is located at 178 Newbury street, within two blocks of all the principal car lines, and in one of the most accessible portions of Boston. Dr. Edward Everett Hale's church is next door to the school, a block away is the Boston Athletic Club, and the Harvard Medical School, the Boston Art Club, the new Old South Church, and the Massachusetts Normal Art School, while the Public Library, the Museum of Fine Arts, and Copley Square are but two blocks away. The beautiful and park-like Commonwealth avenue is only a block distant from and parallels Newbury street.

On the twenty-first anniversary of the opening of the Horace Mann School, the formal dedicatory exercises of this new building occurred on November 10, 1890, and were participated in by eminent men and women who were striving to advance the welfare of the deaf, including Dr. Edward Everett Hale, Mr. George C. Mann, a son of Horace Mann, Hon. Henry S. Washburne, Miss Sarah Fuller, Hon. John W. Dickinson, Dr. Caroline E. Hastings, Dr. Samuel Eliot, Hon. Charles I. Gallagher and others. Mayor Hart stated that "the Commonwealth, of which Boston is truly the capital, demands that *every child* in Massachusetts shall have the full benefit of a common-school education. When the law makes this demand, the blind and the deaf are included.... For twenty-one years today, the city has maintained for the deaf a free public day-school, which now finds a home in the splendid building dedicated today. For this magnificent estate we are under obligations to the city and the Commonwealth, the latter contributing the land and a part of the running expenses, while the city of Boston supplies the building, costing with the furniture, more than $90,000, and maintains the school.

"Great praise is due also to the teachers of this school, especially the faithful principal, who has served from its very beginning. In addition, it behooves us all to remember with gratitude

the services rendered to the education of the deaf by the distinguished inventor of the telephone bearing his name, Dr. Alexander Graham Bell. His great career in this country is due to the fact that Boston invited him to come here and teach the more effectual transmission of human speech. He has taught the deaf to understand the words of wisdom and love, and he has enabled us all to understand when we are spoken to over great distances...."

The Hon. Gardiner Greene Hubbard delivered an interesting historical address, "recalling the memory of him through whose instrumentality it was founded." Mr. Hubbard said: ". . . . To Miss Fuller, this school and the deaf children of America owe a debt of gratitude that can never be repaid.... This school is appropriately named the Horace Mann School, since Mr. Mann was the first to recommend the adoption of the oral system; but it was to Mr. King that this school owes its existence. The names of those who laid the foundation and built the edifice should not be forgotten. A bronze tablet should be affixed to its walls; and thereon, associated with the name of Horace Mann, should be inscribed the names of Dexter S. King and Sarah Fuller, that thus the names of the three who have done so much for the education of the deaf may be perpetuated. . . . As the direct offspring of this the first day-school, similar schools have grown up in other States, and its influence is felt through the length and breadth of our land.... But this school represents not merely the opening of the first day-school, but with the Clarke Institution, the introduction and development of a system of education for the deaf until then unknown in this country. . . ." Then Mr. Hubbard told how a few years after the Horace Mann School was started, "an English gentleman, Mr. B. St. John Ackers, visited the various schools of England and America, seeking for the best means of educating his own deaf child. He decided that she should be taught by articulation, rather than by signs, which was the system then used in the English institution. He was so much pleased with this school that he engaged one of its teachers, Miss Barton, to return with him. More and more convinced of the superiority of articulation teaching, and feeling the importance of thorough and earnest teachers, he was led to establish a normal school, which has sent out many teachers well-fitted for their work. Subsequently, Mr. Ackers, then a member of Parliament, was influential in securing

the appointment of a 'Royal Commission' to investigate and report upon the condition of the blind, the deaf, and the dumb of the United Kingdom, and was appointed one of the commission by the Queen. Dr. Gallaudet and Dr. Alexander Graham Bell were invited to be present, as representing the two systems in use in this country. Dr. Bell gave a full account of the Horace Mann School and its work, in which he has always felt the deepest interest. In their report the Commission recommend: 'That every child that is deaf should have full opportunity of education in the oral system; that all children should be for the first year, at least, instructed in the oral system, and after the first year they should be taught to speak and lip-read on the oral system, unless they were physically deficient. That children who have partial hearing should in all cases be instructed in the pure oral system. That trained teachers of the deaf should, as in Germany, receive salaries such as would induce teachers of special attainments to enter the profession, and on a higher scale than those enjoyed by trained teachers of ordinary children.'

"When we consider," added Mr. Hubbard, "that the interest in deaf-mute education which formed the Royal Commission, and that the recommendations which have so changed the system of education in Great Britain, are a direct growth from our work, have we not reason to believe that the seed sown in our weakness has already borne much fruit and will yield a still more abundant harvest? ...."

Mr. Edwin P. Seaver, superintendent of public schools, said, ".... Time was when persons born deaf were classed with the idiotic, as being incapacitated for instruction or for communication with their fellowmen. They were regarded by the law as *non compos mentis*, and placed under guardianship, when necessary, as idiots were. Down to quite recent times the common assumption was that the congenitally deaf could never learn to speak. Deprived of hearing, they were also of necessity deprived of speech. Evidence of this is found in the usual appellations 'deaf-mute,' or 'deaf and dumb,' which have their equivalents in all languages...." Then he outlined the many "reasons for undertaking to put deaf persons in the fullest possible communication with hearing and speaking people," and added, "but there is another and more weighty reason still. It has been pointed out by an eminent authority, Dr. Alexander Graham Bell, that if non-speaking deaf people are kept apart from others,

so that they associate chiefly among themselves, cultivating their sign-language to a higher and higher pitch of perfection, and becoming more interested in each other than in people outside their own little circle, there is a real danger lest, through the force of heredity, a dumb variety of the human race may ultimately become established. There are some remarkable statistics which support this view. Social arrangements which favor intermarriages among non-speaking deaf people are clearly undesirable, and ought by all means to be discouraged. The direct way to do this is to encourage and facilitate to the utmost social intercourse with people not so afflicted."

Not only does the Horace Mann School receive as pupils children who were born deaf or became deaf through illness or otherwise, but it strives to aid any hearing pupils in the other public schools in Boston who may be handicapped with defective speech. In this excellent work the school enlisted, in 1903, the enthusiastic and sympathetic services of Dr. William N. Bullard, neurologist at the children's hospital. To avoid any interruption in the children's daily lessons, this special instruction is given on Saturdays. "Three distinct groups were formed for class instruction, according to the various needs—pupils needing correction of stammering; pupils needing correction of stammering and of defective speech; pupils needing correction of defective speech. In addition there were two pupils who required individual teaching because of lack of mental and physical development. In every case the results of the few months' work were such as to warrant a continuance of the instruction during the coming year, and the giving of a more extended notice of it in order to reach others."

It will be recalled that the Horace Mann School opened with nine pupils on November 10, 1869. Thirty-six years later the number of pupils enrolled at the close of the school year, in June, 1905, was one hundred and forty-six, about evenly divided between boys and girls. During these years, covering more than the allotted life-period of a generation of mankind, several hundred pupils have joined its classes, many of whom are now actively engaged in commercial, industrial and professional occupations, and are in no wise dependent on relatives or society for sustenance. School Document No. 19, for 1893, contains this paragraph: "The inquiry, What can these boys and girls do? can best be answered by mentioning some of the occupations in

which pupils from this school are now engaged, and in which they find pleasure as well as profit. They are those of the cabinet-maker, carpenter, lather, mason, painter, brass-worker, harness-maker, tanner, stableman, fisherman, farmer, lumberman, diamond-cutter, engraver, tool-maker, compositor and printer, milliner, dressmaker, artist, writer, and occupations of the various factories—watch, shoe, parasol, tack, and rubber."

The annual report for 1905 stated "that the steadily increasing number of pupils requiring the special instruction afforded by this school is the reason for urging immediate action, as we of this committee feel that we must, in providing a larger building and more ample space for yard room. When the school was moved into its present building, in 1890, it numbered eighty pupils, and, in the opinion of persons who had watched its growth for twenty years, accommodations for one hundred pupils would be sufficient for the future. The ten rooms then provided have long since been outgrown, and the attic floor has been utilized for class-rooms, and every available portion of the house has been called into requisition to meet unexpected demands."

In 1880, Miss Fuller began a systematic effort to encourage the teaching of the deaf child in the home, just in the same manner as the hearing child is taught, to the end that when the deaf child arrived at the school age it would possess a slight vocabulary and some comprehension of the English language.

"Through the influence of the Horace Mann School, the first infant school for the deaf, in America," was established on June 15, 1888, by Mrs. Louisa Brooks, in West Medford, Massachusetts. Mrs. Brooks was "the mother of a deaf child," and named the school "The Sarah Fuller Home for Little Children Who Cannot Hear." In this home infants of two years of age, or older, are admitted, taught speech and speech-reading and prepared to enter the Horace Mann School in the belief that "early teaching brings to the child who cannot hear by a slower process, what hearing children slowly absorb and lead it in various ways to a comprehension of the world about it and to habits of self-command. It is hard for any one to realize that speech and language do not come of themselves but are the result of hearing. The little child deprived of hearing must be taught the particular word which corresponds to every object and action also the relation of every word to every other word, as well as to understand and use familiar speech. And all this must come through the medium of

sight." It is pleasant to learn that the "theory and practice of this home is that the children are in no sense in need of pity—that if they are regarded as happy, progressive and self-reliant, they will become so; this they are to an unusual degree," notwithstanding, that they are burdened with the misfortune of deafness. Similar homes have since been opened in other cities, notably the Home for Teaching Speech to Little Deaf Children in Philadelphia, founded by Emma and Mary S. Garrett, where deaf children are also admitted at two years of age.

During the discussion of Dr. Bell's valuable paper on "The Condition of Articulation Teaching in America," presented at the Seventh National Conference of Superintendents and Principals of Institutions for the Deaf, held at Colorado Springs, in August, 1892, it was held by some of the speakers that when a State provides for the instruction of children, if the State determines that the best interests of the children demand that they be taught manually, the parents have nothing to do with it, and that this pandering to the desires of the parents, who in many cases are not competent to judge, is harmful to the schools.

Among those who dissented from such extreme views, was Miss Fuller, who said: "I fear that the parents will be misunderstood if I do not say a word in their behalf. The school of which I have charge was brought into existence by the wish of parents, that their children might be educated under their own care and supervision. In Massachusetts we are antiquated enough to believe that the parents constitute, at least, a part of what we call our State of Massachusetts; and we believe too that the parents have the same right to superintend and advise and suggest whatever they think is best for their deaf children as they do for their hearing children. When, more than twenty years ago, I was privileged to come among you as a teacher, I came as a public school teacher from the common schools, and have continued to be a public school teacher, although instructing deaf children; and the one impressive thought that came to me as I sat among you and listened to the remarks and discussions was, these teachers seem to have the entire control of the education of the deaf children. Who is sufficient for these things? That impression has come back to me with great force today. Is it right for us to ignore the rights of the parents? If we were parents, would we be willing to put into the hands of strangers the most sacred trust that can be given to man? It seems to me that there was a mis-

understanding this morning in regard to the condition of the children who come to us for education. If I may speak of my own work, I will say that there are children who come to me having speech and some hearing; others who have no hearing but some speech; another group having neither hearing nor speech, having lost it at a very early age or having been born without the sense of hearing. The first and second groups are educated very much as the children in the public schools. Our school is under the Public School Board of Boston."

At the World's Congress of Instructors of the Deaf, held at Chicago, in July, 1893, Miss Fuller read a ten-minute paper entitled Day Schools for the Deaf, the primary object of which was "to induce parents of deaf children, through a consideration of some of the advantages which home and family-life afford, to make their homes in the vicinity of schools for the deaf, and allow their children to attend them as day pupils." Miss Fuller held that ".... It would almost seem as if such an arrangement would be the first wish and purpose of every parent on finding that his child is deaf, and on that account needing to have life rich in opportunities for seeing and experiencing all that can be made helpful to his mental growth. Consider for a moment what *home* means to all children, and then reflect upon what it may be made to a deaf child.... The stirring, active life of the home appeals in a variety of ways to the untried powers of a child, and rouses within him a desire to know and to do as those about him are doing. Through repeated experiments and their resulting successes or failures the child learns to know himself, and to use, within narrow limits, all the powers he possesses. Experience, so essential to the right understanding of what can be fully known, is a necessity to the deaf child's true comprehension of much that he needs to know, and the home—the world in miniature—is the place where this experience should be obtained. Sharing in homely duties, however trifling, gives almost unnumbered opportunites for laying the foundation for all true character-building. Mutual services and mutual concessions teach the deaf child as well as the hearing of the interdependence of social relations, and prepare him for the responsibilities and duties of life. The natural relations into which a child is born are the best means by which love, truth, unselfishness, and obedience are fostered, and from which he should pass into the larger social and business world. All of this home education

and much more is begun, whether the parents are conscious of the fact or not, before the child is placed under the special training provided by schools. How best shall that school training become one of the agencies in the harmonious, natural development of the child's mental, moral, and physical nature? I would answer, by making it supplemental to this home education. Keeping undisturbed the home environment, the school should minister to the needs of its members individually as well as collectively."

In April, 1894, Miss Fuller organized the Boston Parents' Educational Association for Deaf Children. Its active membership includes only the parents of deaf children, and its objective mission is, "to encourage home instruction at the earliest possible age; aid schools for the deaf in the city of Boston; help deaf children to continue their education in schools or colleges for hearing persons; aid them in acquiring a practical knowledge of useful trades and business; assist them in obtaining a remunerative employment; bring them into more extensive social relations with hearing persons; and employ such means for their advancement as may be deemed advisable." So beneficial has been the work of this Association, that similar organizations have been formed in other cities, including Chicago, Milwaukee, Detroit, Cincinnati, Los Angeles, San Francisco and Oshkosh, as well as in certain cities in other countries.

In July, 1897, in an address to the Parents' Association of Baddeck, Cape Breton, Nova Scotia, Miss Fuller said: ".... In the Horace Mann School, which you know is for deaf children, we had realized, what every teacher comes to know, that the value of her work is greatly enhanced if supplemented by an abundance of material;—books to expand thoughts upon the subjects for study, maps and charts to fix clearly in mind historic places and events; specimens of substances from the animal, vegetable, and mineral kingdoms for giving clear conceptions of some of the endless varieties of earth's productions. Every household, however humble, can contribute something to such collections and thus bring parents, pupils, and teachers into close and sympathetic life. Common household articles in use for food,—materials for clothing and shelter, which, if already happily known by name to the child, may serve as a topic for language work,—sections of logs with branches having leaves, buds, blossoms or seeds by which children may recognize characteristics and

classes; salt, spices, medicinal liquids; manufactured goods, from faraway places, which could be lent or given for purposes of instruction. The stories of real things are often more fascinating to very young children than are story-book tales of the sayings and doings of other children. 'Let the chair tell a story now,' or 'let the stove tell a story,' are requests very familiar to teachers, who have through common things such as knives, spoons, cups, windows, houses, etc., led their pupils into a fairy-land which only children know how to enjoy.... Children cannot live too close to Mother Nature, and parents will do well to foster the spirit of inquiry, which these wonder-loving little souls naturally exhibit when they see the daily miracles wrought by her. No amount of time or effort in later years will compensate for a loss of sympathy and encouragement during this, the perceptive period of life.

"The school is but an extension of the home, and the teacher —the representative of the parents during five or six hours of the day—is doing for the child what each father or mother would do, did time and opportunity permit. Sympathy, cooperation and entire harmony should characterize the relation between parent and teacher, and both should have a good knowledge of child nature and child need. The purpose of the Horace Mann School, in Boston, has been to serve the best interests of the children in their homes as well as in the school-room, and the Parents' Association designed as a direct aid to both, is dominated by a similar spirit. Nearly all of its members are busy fathers and mothers who cannot well take time from their daily occupations for anything that does not appeal to them as a duty, but on the appointed evenings for meetings of the Association, the attendance has been a gratifying evidence of interest."

Another great blessing that is in part credited to the excellent influence of the Horace Mann School was the appointment of the Royal Commission to examine into the whole subject of the education of the deaf, as related by Mr. Hubbard. Dr. J. C. Gordon wrote that "this commission endeavored to examine the whole field of deaf-mute instruction with characteristic British thoroughness and energy. Schools upon the Continent were visited, and in London the commissioners held over one hundred and sixteen sittings, calling before them forty-three persons as experts specially interested in the welfare of the deaf, and deemed capable of giving information of great value upon the subjects of

inquiry." The complete report of the commission covers 1,574 pages, and its recommendation to the British Parliament in 1889, was that every child who is deaf should have full opportunity of receiving its education by the pure oral method.

The high esteem in which thoughtful parents hold the work of the Horace Mann School, is shown in the gifts it receives from time to time. Space will not permit an enumeration of each gift, but among the number the following may be cited:

In 1893, the sum of two thousand dollars was received from the estate of Samuel E. Sawyer. This gift was invested in the bonds of the City of Boston, and the income is expended for the benefit of the pupils.

In 1896, the school committee reported that the Horace Mann School "has been greatly enriched the past year through the kindness of Mr. Henry W. Putnam. By his liberality the grammar hall was beautifully decorated, the walls tinted and set with friezes, and the gift of appropriate busts, pedestals and vases received. All was done under the artistic supervision of Mr. Ross Turner. It is with pleasure that we record the continued interest in the school displayed by its friend and patron, Dr. Alexander Graham Bell, who gave fifty dollars for the purchase of a typewriter for school uses. Another substantial gift of money for the children's school library was made on behalf of a girls' sewing society in Jamaica Plain, Massachusetts, by a daughter of James C. Davis, Esq."

In 1897, the school committee reported that the Horace Mann School received a "gift of two hundred dollars from Mrs. John McCandlish, for the purchase of books for the school library. This generous donation is the direct result of the influence of the Boston Parents' Education Association. There was also a gift from Mr. John McCandlish, of one hundred and twenty-five dollars towards a memorial tablet to Francis Green, the first man in this country to urge the need of schools for teaching deaf children by the oral method. Dr. Alexander Graham Bell has given fifty dollars for the same purpose. Mr. S. D. Warren has again kindly remembered the school with the sum of one hundred dollars to defray the expenses of printing. We would also acknowledge other gifts in small sums. These were used to pay expenses of pupils visiting places of historic interest, in connection with class work."

In 1903, the report of the school committee reads: "Others

than those immediately connected with the work are valuing the Horace Mann School, as seen by the legacy of one thousand dollars left it during the year by the late Elizabeth Lewis. Recognition has also come from out of the State, the school having received as a gift the Century Dictionary (ten volumes and a bookcase) from leading residents of a New Hampshire town, in appreciation of what Miss Fuller and the special teacher of articulation had done in behalf of an adult inhabitant during a vacation."

The origin of many other blessings to humanity are directly traceable to the Horace Mann School, and not the least among the number is the invention of the electric-speaking telephone. At the twenty-fifth anniversary of the opening of the Horace Mann School, Dr. Alexander Graham Bell stated that "the School Board of Boston, at the solicitation of Miss Fuller, your worthy principal, invited me to visit the United States for the purpose of helping her teachers in their efforts to teach the deaf children of Boston to speak, and to understand speech by watching the movements of the mouth; and in April, 1871, I entered upon the work.... It is only right that it should be known that the telephone is one of the products of the work of the Horace Mann School for the Deaf, and resulted from my attempts to benefit the children of this school. I am proud indeed to think that twenty-three years ago I was myself a teacher in this school; I am proud to think that I have been a teacher of the deaf ever since."

In its annual report for 1905, the committee on the Horace Mann School wrote: "The recent death of the distinguished philologist, Prof. Alexander Melville Bell, recalls his courteous response, in 1870, to an invitation from the committee on this school to visit it and tell the teachers how his system of phonetic writing, named by him 'Visible Speech,' could be made useful in the development of the speech of deaf children. Perhaps we can make no greater acknowledgment of indebtedness to Prof. Bell and to his system of visible speech than to say that it continues to be the basis of all instruction in speech in this school. The result of his visit was the employment of his son, Alexander Graham Bell, as a special instructor in the school for a period of three months."

On November 10, 1897, a bronze tablet was placed on the wall of the Horace Mann School, in memory of Francis Green,

"The first man in this country to advocate the oral method of instruction for the deaf." The inscription reads:

In memory of

FRANCIS GREEN,

Earliest American Advocate in Behalf of the Education of the Deaf,

Born in Boston, 21 August, 1742;
Died in Medford, 21 April, 1809.

A Graduate of Boston Latin School, 1756, and of Harvard College, 1760; an Officer in the British Army, Where he Served with Distinction; and the Author of "*Vox Oculis Subjecta*" (London, 1783), an early work on the instruction of the Deaf, and a writer for the Newspapers on that subject.

This tablet is a fitting testimonial to a native of Boston, who not only advocated instruction in articulation and speech-reading, in this country and in England, but "was active in promoting the establishment of a free school for the deaf" in England, and unsuccessfully endeavored to have such an institution established in America. During more than twenty-five years he put forth earnest and continued efforts in behalf of the deaf, and contributed many articles on the subject of the education and alleviation of the deaf, to the *New England Palladium*, the *Boston Courier*, and other periodicals. He also compiled statistics concerning the name, age, sex and residence of the deaf in Massachusetts. His interest in behalf of the deaf was aroused through finding that his own son Charles Green, born deaf or who lost his hearing before six months of age, could be taught to converse freely. This son was sent from Boston to Edinburgh, Scotland, where he entered Braidwood's Academy, in February, 1780, and in time was able to carry on a conversation orally. Dr. Bell believes that "there can be no doubt that the 'Messrs. Braidwood' (Thomas Senior, and his son John) were among the best teachers of the deaf that the world has yet produced."

(*To be continued.*)

THE AMERICAN INSTITUTIONS FOR THE EDUCATION OF THE DEAF.[1]

G. FERRERI, ROME, ITALY.

CHAPTER XIII.

EDUCATION OF THE BLIND-DEAF.

Long before undertaking the comparative study and research of American schools, I had certain experience in the things of which I have spoken. Now, however, I must treat a subject in regard to which I have had only speculative ideas, as I was obliged to confess the first time I wrote on the results of the education of the Blind-Deaf.

The phenomenon of the complication of deafness with blindness is fortunately rare in Italy.[2] So much so that even Pendola, who had been in the midst of the Deaf for more than half a century, had no experience with it. Indeed, for a long time he did not even know that the instruction of a blind-deaf individual was possible. (See the *Statistics of the Deaf in the Grand-Duchy of Tuscany,* 1844.)

As regards myself, I think I can affirm that, in some cases of deafness complicated with blindness, they have never gone farther in Italy than an elementary religious instruction.

In saying religious instruction, it would seem at first to say a great deal. Because I think that for those persons who had never had any idea of religion, communicated first of all from the lips of a mother, and fortified later by the example of exterior worship, religious instruction is one of the most difficult. But notwithstanding this, the object of the first educators of the Deaf was exclusively that of giving their pupils a knowledge of the Christian doctrine, and to incline their hearts to a moral and

[1] Translated from the Italian for THE ASSOCIATION REVIEW by the author. Begun in the June, 1904, number.

[2] The last Italian census gave the numbers 196 Blind-Deaf, 38,204 Blind, and 31,211 Deaf. But the census is made in Italy in such a manner as not to be of any value for particulars of this kind. In fact, they do not distinguish either the kind nor the nature of the pathological case in question.

religious sentiment. An irrefutable proof of this lies in our special literature, made up two-thirds of religious catechism.

The teaching of language was never an end in itself, but only served as a means for the explanation of the mysteries of religion. They also made use of drawing as an aid in this instruction. I do not believe, however, that for the Deaf any form of worship can have a real spiritual value unless it is possible to give them an explanation founded, above all, on their knowledge spoken and written. It is true, however, that many competent educators, as Assarotti, Boselli, Pendola, Ghislandi, to quote only our own, believed that they could succeed better and quicker by means of the Mimic. This does not prevent us, however, from having another opinion, and we find ourselves in good company, for we can call to mind Tarra, Brambilla, Marchio, and Pelliccioni, without leaving the reign of the Blest. The educators first mentioned had too high an idea of the Mimic, and as they were also very intelligent, the Mimic had really a value of psychic content. If any thing, they were subject to an illusion. They believed, in good faith, that they could instil into the minds of the Deaf that same psychic content in all its extension of intellectuality and spirituality which it had for themselves. It happened, certainly, in respect to the Mimic, just as it did in the field of general didactics, that memory, too often, took the place of intelligence (and this custom is not yet done away with!), and all that it was possible to commit to memory was considered an intellectual acquisition. They interpreted to the letter that famous saying of Cicero's, recognizing as knowledge what one can commit to memory. When, however, just comparisons are made, it is too often seen that the Mimic was and remains a material and materialized language, such, in short, that it does not guarantee, especially in spiritual matters, a sure perceptive comprehension. Every teacher can, in fact, verify the ability of the Deaf to reproduce by imitation gestures and mimic of matchless ascetic meaning, without having the shadow of an idea or of psychic elaboration. What can be obtained with the Blind-Deaf in religious instruction I do not know, nor do I wish to pass judgment upon it from merely speculative premises, which certainly would not be very favorable, if we think of an instruction based chiefly on the sense of touch. But, as usual, this may be a prejudice on my part, not having had any experience with the Blind-Deaf before coming to America. It was only there that I had the

opportunity of recognizing the fact that it had been a real preconception to think that only with touch one could give a higher instruction to the intelligent Blind-Deaf. In fact, I was able to ascertain that the results obtained, which certainly were wonderful, are due above all to the teaching of language by means of writing and the manual alphabet. So that it made an impression on me to hear it said that Dr. Howe undertook the education of Laura Bridgman without knowing the manual alphabet. From what I have since read, however, on the subject, I can now affirm that to Dr. Howe is due only the idea of the education of the Blind-Deaf, and that the practice of it, at least for the results obtained from Laura Bridgman, is due to the ability of the teachers who devoted themselves to this intelligent work of mercy.

Neither in America did they think of the possibility of this instruction before 1837, which was the date of Laura Bridgman's entrance to the Institute for the Blind at Boston. The process of this first case of the education of the Blind-Deaf, one learns from a most interesting publication[1] which I read in America, and which will shortly be followed by a more complete study prepared by the daughters of Dr. Howe.

Now, however, it can be said that the education of the Blind-Deaf has gone beyond the period of experiment and of exceptions and has become a general fact.

In the Institution for the Deaf at New York, I met, soon after my arrival in the United States, some speaking Blind-Deaf in whom instruction had already given good results. One girl, especially, seemed to me so well educated that I could not believe it possible to carry instruction farther. From the conversations I was able to have by means of Dr. Currier's fingers, I gathered that, when there is intelligence, one can teach written and spoken language in spite of whatever deficiency there may be in the development of the senses. To the questions I asked the girl, she replied either by spoken words or by means of a typewriter, in the use of which she had acquired a marvelous rapidity and precision. But the revelation for me did not consist in this, but rather in ascertaining that the girl knew already the English language to perfection, and, therefore, was in condition to understand any information which was transmitted to her by the manual alphabet. I was persuaded then that the instruction of the Blind-

[1] "Life and Education of Laura Bridgman." Boston, 1879. Observations and daily notes by Mrs. Lamson, who was one of Laura's teachers.

Deaf is not a miracle, nor is it an American exaggeration, but a fact resulting from the intellectual condition of the pupil and from the power of the organism of language as an instrument for the elaboration of ideas.

It can now be maintained that the luminous idea of Dr. Howe could not have been effectuated with the success it had, if one of Laura's teachers had not taken from the Didactics of the Deaf the manual alphabet, which is, after all, the means most adapted for the communications of the teacher with the Deaf affected by blindness. It is easy to explain, then, that, given a sure means of teaching and the psychic capacity of learning language, the development of the Instruction of the Blind-Deaf reënters the circle of natural phenomena.

In a recent article translated from Norwegian into German[1] by our colleague Stelling of Emden, we read that the first attempt to teach articulate speech to the Blind-Deaf is that of the Principal Hofgaard, of Hamar (Norway). It seems to me that it would be only just to remember that Dr. Howe had also wished that a teacher should teach Laura Bridgman to speak. He did not have the good fortune, however, to find one who united with the art of teaching the blind the ability of teaching speech to the Deaf. Hence, the vocabulary of Laura Bridgman did not go farther than six or seven words and a few monosyllables which had for her and those near her the value of words. But anyway, it is not a question of who was the first that should interest us, but rather that of the possibility of such instruction. Now, it seems to me that in the United States they do not give the attention and consideration to this point which they ought to. And this defect must be attributed, according to my opinion, to the fact that there are no special Institutes in America for the educaion of the Blind-Deaf. It happens, in consequence, that they are admitted to the Institutes of the Blind, or, as an exception, to those of the Deaf. They think this is the best way to do, as is shown in a recent discussion on this subject by the educators of America. Nor do I wish to oppose myself to those who can boast a certain experience; therefore, I will limit myself to the statement of the things observed.

I have seen that the greater part of the cases of deafness and blindness are not congenital, or at least that the complication of

[1] "Organ der Taubstummen-Anstalten in Deutschland." 1903, 3 Heft. S. 74.

disasters is not congenital. In the Institute for the Blind in Boston, to give an example which illustrates my observation, I saw four girls who had become deaf or blind, or one and the other at the same time, after the second year of their age. Another was not at all mute, but only blind and deaf. In all of them, however, I saw a decided tendency to speak. Now, it seems to me that in such conditions one cannot and should not make a question of systems, so or so combined, but that one should give every care to the development and to the possible perfection of that tendency, which is, after all, most natural and offers a precious element of restoration in the midst of so much ruin. The Blind-Deaf who can speak has so many advantages over the blind deaf-mute that it ought to conquer every doubt and turn the attention of the educator, I would almost say from preference, to the cultivation of articulated speech. When the Blind-Deaf speaks and replies aloud to his interlocutor, he not only shortens by more than half, the path of instruction, but he feels himself nearer to humanity, because he is persuaded that he can overcome the obstacles which separate him from intercourse with his fellow-creatures and from spiritual communion of the family and the society of normal persons.

But let us limit ourselves to more elementary considerations and to what Physiology teaches us.

Every child, at the epoch of the physiological development of its organ of hearing and speech, tries to speak. This rule is confirmed by the exception made by idiots, in whom is lacking the will to do the action, because in them is lacking the central coordination and the mutual recall of the symbols of language. The intelligent Blind-Deaf cannot be helped like the Deaf by making use of the means of natural mimic, and so force themselves like normal persons to put into action the organs of speech. Of all this I had confirmation in the observations which I made in the school for the Blind at Boston, and in the study of the process followed in the education of Laura Bridgman, as well as in the conversations of several months which I was able to have without any interpreter with Helen Keller.

Of Laura Bridgman we read, and she who wrote it is still living, that "the impulse to pronounce a sound as the distinct name of a known person, seemed to be the first to be put into action; the translation of it into the language of signs came afterwards."

We can say that this not only seemed, but was an unquestionable fact. The impulse to speak is, in fact, common to all deaf-mutes whose deaf-mutism is not caused by central injuries, and one may say that the aptitude for speaking stands in direct relation to the degree of ability in conscious and intelligent mimic. This observation is analogous and parallel to that made by specialist physicians for the treatment of speech in defective children. In them, troubles in speech and incapacity for spontaneous or imitative speech are accompanied by a rigidity more or less serious of the limbs. We may also admit that the great skill and mobility which the hands of the Blind-Deaf acquire in the exercise of the manual alphabet correspond to the impulse they have to articulated speech. I have noticed, for example, in Helen Keller that the movement of her hands (manual alphabet) nearly always accompanies her speech, when she is thinking and elaborating in her mind what she intends afterwards to write.

Were it not that the system in vogue in the United States for education of the Blind-Deaf is decidedly opposed to studies which demand a scientific aim and a comparative analysis, it would be well, I think, to institute special researches, not only in the functional reciprocity and individual peculiarity of the different neuro-psychic factors of language, but also of the negative relation of the sensorial powers and the complex act of perception.

Mr. Wade, who is a sincere and devoted friend of these unfortunate ones, and who has made it his special mission to help materially and morally all the Blind-Deaf who come to his notice, holds the opinion that for teaching the Blind-Deaf no technical preparation is necessary. What he wrote in a recent publication, he has repeated in Convention (1901), to banish the idea of a special Institute for the Blind-Deaf of the United States. "It is sufficient," he said, "to put an intelligent, kind teacher in daily communication with a blind and deaf child, and he will acquire by himself so much experience as to surpass what the accumulated wisdom of centuries could suggest."

I am not precisely of this opinion, and believe that a special preparation would advantage a thousand times the task of the teacher, however kind of heart or intelligent.

Mr. Wade quotes, in support of his theory, some practical examples, and he has the good fortune to be able to indicate to the admiration of the world, in the excellent teachers who have dedi-

cated themselves to this mission, many personalities of intelligence and loving-kindness who, without any preparation, put into practice in the best possible manner the brilliant idea of Dr. Howe. Nor have I any reasons to oppose to these facts. But, in referring to what I have read on the subject, and to what I have learned from conversations with clever teachers of the Blind-Deaf, I could maintain, in my turn, that these capable teachers were not spared loss of time and fatigue of vain experiments, of young inexperience, and of dangerous deviations. And, if some one of them had been able to proceed directly to the goal, this was owing above all to the study of the process applied in the education of Laura Bridgman—processes constituted by the observations and studies of many and various teachers; and this, for me, signifies a special preparation. So that it is true that Miss Sullivan, the friend, teacher, and interpreter of Miss Keller, could today expound with unquestionable competence the defects, and the corrections of them she was obliged to make in those same processes, which were her guide in the arduous task which she has now triumphantly brought to an end.

From all this I am induced to maintain that a systematic arrangement of the studies and observations which the capable American teachers have made until now, could and should establish the basis of a real and true method for the development of the intellectual powers of the Blind-Deaf.

To this method in which written language is considered almost exclusively as the instrument for developing the higher powers, ought to be added, for the reasons given, a system for teaching articulated speech.

The happy experiences made in this respect by Hofgaard should be sufficient to spread this belief, and the educators of America should be convinced that "to limit the means of expression for the deaf-mutes and for the Blind-Deaf to the sole manual alphabet, means limiting their sphere in life." This is the opinion of Helen Keller, whom I believe to be more competent in the subject than any of us who write and talk of Pedagogy more or less scientific.

(*To be continued.*)

SPECIAL REPORT UPON THE DEAF, BASED ON THE RETURNS OF THE TWELFTH CENSUS.[1]

PREPARED BY ALEXANDER GRAHAM BELL AS EXPERT SPECIAL AGENT OF THE CENSUS OFFICE.

(*Continued from page 356.*)

Sex.—Out of a total of 89,287 persons returned as deaf, 46,915 were males and 42,372 were females (Table 2[2]); the majority of the deaf are males. This fact has often been commented upon; for it is a matter of common observation that in schools for the deaf, male pupils are nearly always in the majority. The question, therefore, has often been discussed: "Why is it that there are more deaf males than females?" Various hypotheses have been adduced, such as that males are more exposed to the accidents and diseases of life than females, etc. It may be well, however, to be cautious about generalizations of this kind without sufficient evidence, for the question proposed bears a remarkable likeness to the old catch-question that has puzzled so many school boys: "Why do white sheep eat more than black sheep?" to which the answer was, "There are more of them." There are more males in the population at large than females (Table XXVII), so that there is really nothing surprising about the fact that the majority of the deaf should be males. Of the total population, 51.1 per cent are males and 48.9 per cent, females.

In the case of the deaf 52.5 per cent are males and 47.5 per cent are females (Table XXVIII). It thus appears that the proportion of males among the deaf is somewhat in excess of the proportion in the population at large, so that there may be some truth after all in the hypothesis that males are more exposed to accidents of life than females, or more susceptible to the diseases that produce deafness. It is to be noticed, however, that the predominance of males is not confined to those who lost hearing from accident or disease, but extends to the congenitally deaf. Of the deaf from birth, 53 per cent are males and only 47 per cent females (Table XXIX[2]).

[1] A reprint of "Special Reports: the Blind and the Deaf," in the part relating to the Deaf; issued by the Department of Commerce and Labor, Bureau of the Census, Washington, 1906. Commenced in the October, 1906, number of the REVIEW.

[2] Omitted from this republication.

TABLE XXVII.—*The deaf, by sex, race, nativity, period of life when deafness occurred, degree of deafness, and ability to speak, compared with total population.*

SEX, RACE, AND NATIVITY	Total population	THE DEAF								
		Total	Period of life when deafness occurred			Degree of deafness		Ability to speak		
			Childhood (under 20)	Adult life (20 and over)	Unknown	Totally deaf	Partially deaf	Well	Imperfectly	Not at all
Total	75,994,575	89,287	50,296	35,924	3,067	37,426	51,861	55,501	9,417	24,369
Sex:										
Male	38,816,448	46,915	26,543	18,797	1,575	20,218	26,697	28,306	5,114	13,495
Female	37,178,127	42,372	23,753	17,127	1,492	17,208	25,164	27,195	4,303	10,874
Race:										
White	66,809,196	84,361	46,807	34,655	2,899	34,590	49,771	53,449	8,902	22,010
Male	34,201,735	44,223	24,674	18,069	1,480	18,604	25,529	27,149	4,850	12,224
Female	32,607,461	40,138	22,133	16,586	1,419	15,896	24,242	26,300	4,052	9,786
Colored[1]	9,185,379	4,926	3,489	1,269	168	2,836	2,090	2,052	515	2,359
Male	4,614,713	2,692	1,869	728	95	1,524	1,168	1,157	264	1,271
Female	4,570,666	2,234	1,620	541	73	1,312	922	895	251	1,088
White:										
Native	56,595,379	69,865	41,155	26,612	2,098	30,054	39,811	42,721	7,657	19,487
Male	28,686,450	36,338	21,665	13,604	1,069	16,199	20,139	21,366	4,138	10,834
Female	27,908,929	33,527	19,490	13,008	1,029	13,855	19,672	21,355	3,519	8,653
Foreign born	10,213,817	13,786	5,108	7,963	715	4,014	9,772	10,533	1,111	2,142
Male	5,515,285	7,506	2,704	4,427	375	2,215	5,291	5,686	637	1,183
Female	4,698,532	6,280	2,404	3,536	340	1,799	4,481	4,847	474	959
Unknown nativity		710	544	60	86	522	188	195	134	381
Male		379	305	38	36	280	99	97	75	207
Female		331	239	42	50	242	89	98	59	174
Colored:										
Negro	8,833,994	4,649				2,701	1,948			
Male	4,386,547	2,526				1,449	1,077			
Female	4,447,447	2,123				1,252	871			
Indian	237,196	273				132	141			
Male	119,484	163				73	90			
Female	117,712	110				59	51			
Mongolian	114,189	4				3	1			
Male	108,682	3				2	1			
Female	5,507	1				1				

[1] Including Indians and Mongolians.

Table XXVII shows the deaf by sex, race, and nativity in relation to the time when deafness occurred, degree of deafness, and ability to speak.

Table XXVIII shows the number and percentage of the deaf of each sex, by period of life when deafness occurred, degree of deaf-

TABLE XXVIII.—*Number and per cent of deaf, by degree of deafness, sex, race, marital condition, and deaf relatives.*

SEX, RACE, MARITAL CONDITION, ETC.	NUMBER			PER CENT	
	Total	Male	Female	Male	Female
Total	89,287	46,915	42,372	52.5	47.5
Period of life when deafness occurred:					
Childhood (under 20)	50,296	26,543	23,753	52.8	47.2
Adult life (20 and over)	35,924	18,797	17,127	52.3	47.7
Unknown	3,067	1,575	1,492	51.4	48.6
Degree of deafness:					
Totally deaf	37,426	20,218	17,208	54.0	46.0
Partially deaf	51,861	26,697	25,164	51.5	48.5
Ability to speak:					
Well	55,501	28,306	27,195	51.0	49.0
Imperfectly	9,417	5,114	4,303	54.3	45.7
Not at all	24,369	13,495	10,874	55.4	44.6
Race:					
White	84,361	44,223	40,138	52.4	47.6
Colored	4,926	2,692	2,234	54.6	45.4
Negro	4,649	2,526	2,123	54.3	45.7
Indian	273	163	110	59.7	40.3
Mongolian	4	3	1	.....	.....
Nativity of whites:					
Native	69,865	36,338	33,527	52.0	48.0
Foreign born	13,786	7,506	6,280	54.4	45.6
Unknown	710	379	331	53.4	46.6
Marital condition:					
Single	39,070	21,338	17,732	54.6	45.4
Married	34,206	19,746	14,460	57.7	42.3
Widowed	15,331	5,480	9,851	35.7	64.3
Divorced	353	172	181	48.7	51.3
Unknown	327	179	148	52.9	47.1
Deaf relatives:[1]					
a or *b* relatives	25,851	12,834	13,017	49.6	50.4
No *a* or *b* relatives	54,630	29,830	24,800	54.6	45.4
Not stated	8,806	4,251	4,555	48.3	51.7

[1] Symbols for deaf relatives—*a*, deaf brothers, sisters, or ancestors; *b*, deaf uncles, aunts, cousins, or other relatives not *a*, *c*, or *d*; *c*, deaf children; *d*, deaf husbands or wives.

ness, ability to speak, race, nativity of whites, marital condition, and those having deaf relatives. Table XXIX shows the number and percentage of the deaf of each sex, by age when deafness occurred, present age, and school attendance.

Table XXX shows the number and percentage of the deaf of each sex, by causes of deafness.

TABLE XXX.—*Number and per cent of deaf, by sex and causes of deafness.*

CAUSE OF DEAFNESS	NUMBER			PER CENT	
	Total	Male	Female	Male	Female
Total	89,287	46,915	42,372	52.5	47.5
Causes of deafness:					
Affections of external ear	871	546	325	62.7	37.3
Affections of middle ear	34,801	16,241	18,560	46.7	53.3
Affections of internal ear	12,295	7,192	5,103	58.5	41.5
Unclassified	31,205	17,720	13,485	56.8	43.2
Unknown	10,115	5,216	4,899	51.6	48.4
Principal assigned causes:					
Scarlet fever	7,424	3,497	3,927	47.1	52.9
Disease of ear	4,210	2,063	2,147	49.0	51.0
Measles	2,469	1,098	1,371	44.5	55.5
Influenza	1,776	762	1,014	42.9	57.1
Catarrh	11,702	5,565	6,137	47.6	52.4
Colds	3,074	1,387	1,687	45.1	54.9
Malarial fever and quinine	1,636	846	790	51.7	48.3
Meningitis	3,991	2,355	1,636	59.0	41.0
Brain fever	2,013	1,189	824	59.1	40.9
Typhoid fever	2,055	1,054	1,001	51.3	48.7
Congenital	14,472	7,668	6,804	53.0	47.0
Old age	3,361	1,727	1,634	51.4	48.6
Military service	3,242	3,231	11	99.7	0.3
Falls and blows	2,243	1,417	826	63.2	36.8
Sickness	2,143	1,020	1,123	47.6	52.4
Fever	1,436	764	672	53.2	46.8
Hereditary	909	429	480	47.2	52.8

It appears from Table XXVIII that there is no substantial difference in the proportion of the sexes among the deaf from childhood and the deaf from adult life; but the proportion of males seems to be greater among the totally deaf than the partially deaf, among the colored than the white, and among Indians than negroes. It is also greater among the foreign-born white than the native, and greater among those who have no deaf relatives (*a* or *b*) than among those who have.

In relation to acquired conditions it may also be noted that the

proportion of males is greater among those who do not speak at all than among those who speak imperfectly, and greater among those who speak imperfectly than among those who speak well. The proportion male is also greater among the married than among the single, widowed, or divorced, and least of all among the widowed.

From Table XXIX it appears that there is an exceptionally large proportion of males (56.2 per cent) among those who lost hearing in infancy (after birth, under 2), and also among those who became deaf in adult life between the ages of 60 and 80 (58.4 per cent).

In regard to present age, the proportion of males is larger among those under 20 years of age than over. The proportion is also larger among those who have attended school than those who have not, and larger among those who attended special than other schools.

From Table XXX it appears that the proportion of males is exceptionally large among those who became deaf from affections of the external ear (62.7 per cent) and of the internal ear (58.5 per cent), but exceptionally small among those deaf from affections of the middle ear (46.7 per cent).

In relation to the principal assigned causes of deafness, the males are greatly in the preponderance among those deaf from meningitis (59 per cent) and brain fever (59.1 per cent).

Among the unclassified cases, those deaf from "military service" and "falls and blows" naturally stand out prominently as having an exceptionally large proportion of males—99.7 per cent in the former case and 63.2 per cent in the latter.

On examining the tables, it appears that males are so generally in the preponderance that in cases where females are in the majority we are at once struck by the fact as something exceptional and apparently abnormal.

From Table XXVIII it appears that among the widowed and divorced, females predominate (widowed, 64.3 per cent; divorced, 51.3 per cent); but females also predominate to a still greater extent among the widowed and divorced of the whole population of the United States (widowed, 69.7 per cent; divorced, 57.5 per cent). The majority of the deaf having (*a* or *b*) deaf relatives are females (50.4 per cent) and the proportion female among those having no (*a* or *b*) deaf relatives is exceptionally small (45.4 per cent).

From Table XXIX it appears that the majority are females among those who lost hearing between 10 and 15, 20 and 40, and in old age after 80—males predominating at other age periods when deafness occurred.

From Table XXX it appears that females predominate where deafness was caused by affections of the middle ear, for example, scarlet fever, disease of ear, measles, influenza, catarrh, and colds; whereas in all the other cases noted males predominate, with the exception of those deaf from the indefinite cause "sickness" (52.4 per cent female) and cases noted as "hereditary" (52.8 per cent female).

In examining the ability of the deaf to speak (Table XXVIII) it is perhaps noteworthy that, while females are in the minority, the proportion of females is greatest among those who speak well, least among those who speak not at all, and intermediate among those who speak imperfectly. It is a little difficult to interpret this result, for the ability to speak is an acquired and not a natural condition, and can not therefore be directly correlated with sex. The opinion has often been expressed by teachers of the deaf that females acquire speech by instruction more readily than males; but the present figures relate to the whole of the deaf—the deaf from adult life as well as the deaf from childhood—and not simply to those who have acquired speech artificially in special schools; so that if there is any truth in this explanation, we should conclude that females, generally, acquire speech more readily than males, whether naturally or by artificial means.

In comparing Tables XXIX and XXX, it will be noted (1) that females predominate among those who became deaf at three different stages of life, namely, 10 and under 15, 20 and under 40, and after 80; and (2) that females predominate among those who are deaf from affections of the middle ear. It is therefore probable that females are more susceptible to deafness from scarlet fever, disease of ear, measles, influenza, catarrh, or colds, at these three distinct periods of life, namely, adolescence, practically all of the child-bearing period, and old age.

While males predominate among those deaf from meningitis and brain fever, and females among those deaf from affections of the middle ear, we should be cautious about basing definite conclusions upon these facts alone.

This will be obvious from the following considerations: The Indiana congestion (due largely to meningitis and brain fever) and the New England congestion (due largely to affections of the middle ear) show that geographic conditions are involved. Now males predominate in Indiana and females in the New England states among the general population, and this fact of itself would lead us to expect

a preponderance of males among the deaf of Indiana and a preponderance of females among the deaf of the New England states, quite independently of any different susceptibility among the sexes to the diseases specified above.

In the present census (1900) Indiana is reported as having a population of 1,285,404 males and 1,231,058 females, so that in that state 51.1 per cent are males and 48.9 per cent are females.

In the case of the New England states, New Hampshire and Massachusetts are the only states having a larger female population than male, but if we include Maine, Vermont, Connecticut, and Rhode Island, we find a total male population of 2,763,796 and a total female population of 2,828,221. In the New England states, therefore, 49.4 per cent of the whole population are male and 50.6 per cent are female.

Both in Indiana and the New England states the sexes seem to be too nearly balanced to upset the hypothesis of greater susceptibility of males to deafness caused by meningitis and brain fever, and greater susceptibility of females to deafness caused by affections of the middle ear. It is probable, therefore, that the hypothesis is correct.

Race.—Out of 89,287 persons returned as deaf 84,361 belong to the white race and 4,926 to the colored races (including 273 Indians and 4 Mongolians). (Table 2 and Table XXVIII.)

Table XXXI shows the number and per cent of the white and colored deaf, by age when deafness occurred, degree of deafness, ability to speak, sex, present age, and school attendance.

Table XXXII [1] shows the number and percentage of the white and colored deaf, by cause of deafness.

Table XXXIII [1] shows, by states and territories, the number and percentage of the white and the colored deaf.

From Table XXVII it appears that of the whole population of the United States, 87.9 per cent belong to the white race and 12.1 per cent to the colored races (including Indians and Mongolians). In the case of the deaf (Table XXXI), 94.5 per cent are white and 5.5 per cent colored, so that the proportion colored is less among the deaf than among the general population.

Of the general population, 11.6 per cent belong to the negro race, 0.3 per cent to the Indian, and 0.2 per cent to the Mongolian (including Chinese and Japanese). Among the deaf (Table XXVII), 5.2 per cent are of negro extraction, 0.3 per cent are Indians, but the

[1] Omitted from this republication.

TABLE XXXI.—*Number and per cent of deaf, by race, period of life when deafness occurred, degree of deafness, ability to speak, sex, present age, and school attendance.*

PERIOD OF LIFE WHEN DEAFNESS OCCURRED, DEGREE OF DEAFNESS, ABILITY TO SPEAK, SEX, PRESENT AGE, AND SCHOOL ATTENDANCE	NUMBER			PER CENT	
	Total	White	Colored	White	Colored
Total	89,287	84,361	4,926	94.5	5.5
Period of life when deafness occurred:					
Childhood (under 20)	50,296	46,807	3,489	93.1	6.9
Adult life (20 and over)	35,924	34,655	1,269	96.5	3.5
Unknown	3,067	2,899	168	94.5	5.5
Degree of deafness:					
Totally deaf	37,426	34,590	2,836	92.4	7.6
Partially deaf	51,861	49,771	2,090	96.0	4.0
Ability to speak:					
Well	55,501	53,449	2,052	96.3	3.7
Imperfectly	9,417	8,902	515	94.5	5.5
Not at all	24,369	22,010	2,359	90.3	9.7
Sex:					
Male	46,915	44,223	2,692	94.3	5.7
Female	42,372	40,138	2,234	94.7	5.3
Age when deafness occurred:					
Unknown	3,067	2,899	168	94.5	5.5
Indefinitely stated	4,630	4,359	271	94.1	5.9
Definitely stated	81,590	77,103	4,487	94.5	5.5
Birth	14,474	12,791	1,683	88.4	11.6
After birth, under 2	7,396	7,168	228	96.9	3.1
2 and under 5	10,536	10,083	453	95.7	4.3
Under 5	32,406	30,042	2,364	92.7	7.3
5 and under 10	7,018	6,567	451	93.6	6.4
10 and under 15	4,464	4,152	312	93.0	7.0
15 and under 20	4,061	3,852	209	94.9	5.1
Under 20	47,949	44,613	3,336	93.0	7.0
20 and under 40	16,588	16,066	522	96.9	3.1
40 and under 60	9,437	9,107	330	96.5	3.5
60 and under 80	6,595	6,375	220	96.7	3.3
80 and over	1,021	942	79	92.3	7.7
Present age:					
Under 5	1,021	951	70	93.1	6.9
5 and under 10	4,551	4,182	369	91.9	8.1
10 and under 15	6,712	6,054	658	90.2	9.8
15 and under 20	6,074	5,515	559	90.8	9.2
Under 20	18,358	16,702	1,656	91.0	9.0
20 and over	70,602	67,397	3,205	95.5	4.5
Unknown	327	262	65	80.1	19.9
School attendance:					
Attended school	65,717	63,680	2,037	96.9	3.1
Did not attend school	13,557	11,027	2,530	81.3	18.7
Not stated	10,013	9,654	359	96.4	3.6
Kind of school attended—					
Special	25,197	24,308	889	96.5	3.5
Other	19,664	18,974	690	96.5	3.5
Both	237	236	1	99.6	0.4
Not stated	20,619	20,162	457	97.8	2.2

total number of Mongolians (only 4) is too small to afford a basis for a percentage.

The comparatively small proportion of colored persons among the deaf may indicate that colored persons are less liable to deafness than white, or that the returns of the colored are less complete than those of the white population. Both hypotheses are probably correct.

From Table XXXI it appears that the proportion colored is larger among those deaf from childhood than adult life. It is also larger among the totally than among the partially deaf. The proportion colored is substantially the same among males and females. In relation to age when deafness occurred, it will be noted that the proportion colored is twice as large among the deaf from birth (11.6 per cent) as the average for the whole of the deaf (5.5 per cent); but among those who lost hearing after birth and under 2, the proportion is abnormally small (3.1 per cent), and it may be possible that many of the colored were unable to decide correctly whether deafness occurred at birth or in infancy (after birth, under 2). The proportion colored is larger among those who lost hearing before reaching the age of 20 (7 per cent), and larger among those who lost hearing in old age after 80 (7.7 per cent) than in the intervening age periods.

In relation to present age the proportion colored is larger among those who are under 20 years of age (9 per cent) than over 20 (4.5 per cent).

In relation to acquired conditions the proportion colored is least among those who speak well, greatest among those who speak not at all, and intermediate among those who speak imperfectly. Among those who attended school only 3.1 per cent were colored, while among those who did not attend school 18.7 per cent were colored, from which it is obvious that the education of the colored deaf is neglected to a much greater degree than in the case of the white. There is no difference in the proportion of the colored among those who attended special or other schools.

From Table XXXII it appears that the proportion colored is greater among those who became deaf from affections of the external ear than among those who lost hearing from affections of the middle ear, and intermediate among those who lost hearing from affections of the internal ear. It is still greater, however, among the unclassified cases.

In considering the classified causes of deafness, the greatest proportion colored is found among those deaf from malarial fever and

quinine (12 per cent); whereas catarrh and scarlet fever, which are known to be among the principal causes of deafness in the country as a whole, show the smallest percentages of colored (catarrh, 1.1 per cent colored; scarlet fever, 1.3 per cent).

In relation to the unclassified causes of deafness, the largest percentages colored appear among the congenital cases (11.6 per cent) and among those deaf from the indefinite cause "sickness" (11 per cent). The proportion colored is also large among those deaf from indefinite "fever" (8.2 per cent) and among those deaf from falls and blows (8.8 per cent).

Table XXXIII shows the geographic distribution of the white and colored races. The largest proportion of colored appears, of course, in the Southern States, and especially in those States composing the South Atlantic division.

The statistics contained in Tables XXXI, XXXII, and XXXIII are suggestive of a racial difference in susceptibility to deafness. It appears at first sight that the colored population is almost immune, so far as deafness is concerned, to diseases of the middle ear, which are known to be predominant causes of deafness. There are, however, many qualifying circumstances that should be taken into consideration:

1. In general, the largest ratios deaf from affections of the middle ear are found in the New England States and in those parts of the country bordering upon the Great Lakes. It may be possible, therefore, that the comparative freedom of the colored people from deafness caused by these diseases (catarrh, scarlet fever, etc.) may be due to the fact that they do not reside in localities favorable to the occurrence of the diseases mentioned. It may be equally true that geographic conditions account for the comparative prevalence of malarial fever and quinine as a cause of deafness among the colored.

2. Among those who lost hearing from affections of the middle ear, the proportion colored may not be as small as it appears from the returns; for the proportion colored is comparatively large among those deaf from indefinite causes, like sickness and fever. These, if definitely specified, might prove to be diseases affecting the middle ear. It is probable that a large proportion of the colored people could not discriminate between these diseases as causes of deafness, on account of illiteracy and lack of medical attention at the time deafness occurred. They might even be unable to discriminate certainly between congenital and noncongenital deafness, for the same reasons.

3. Several thousand letters of inquiry sent out to deaf persons by the Census Office brought no reply; these doubtless were letters principally addressed to illiterates unable to respond by mail. The proportion illiterate is known to be very much greater among the colored than the white in the general population (colored, 44.5 per cent; white, 6.2 per cent). Illiteracy is also more common among the colored deaf than the white, as is shown by the small percentage colored who have attended school, and the large proportion colored who did not know their present ages (19.9 per cent).

In short, we can not rely upon the hypothesis that there is a

TABLE XXXIV.—*Number and per cent of white deaf, by nativity, age when deafness occurred, degree of deafness, ability to speak, sex, and present age*

AGE WHEN DEAFNESS OCCURRED, DEGREE OF DEAFNESS, ABILITY TO SPEAK, SEX, AND PRESENT AGE	NUMBER				PER CENT		
	Total	Native	Foreign born	Unknown	Native	Foreign born	Unknown
Total	84,361	69,865	13,786	710	82.8	16.4	0.8
Period of life when deafness occurred:							
Childhood (under 20)	46,807	41,155	5,108	544	87.9	10.9	1.2
Adult life (20 and over)	34,655	26,612	7,963	80	76.8	23.0	0.2
Unknown	2,899	2,098	715	86	72.4	24.6	3.0
Degree of deafness:							
Totally deaf	34,590	30,054	4,014	522	86.9	11.6	1.5
Partially deaf	49,771	39,811	9,772	188	80.0	19.6	0.4
Ability to speak:							
Well	53,449	42,721	10,533	195	79.9	19.7	0.4
Imperfectly	8,902	7,657	1,111	134	86.0	12.5	1.5
Not at all	22,010	19,487	2,142	381	88.6	9.7	1.7
Sex:							
Male	44,223	36,338	7,506	379	82.2	17.0	0.8
Female	40,138	33,527	6,280	331	83.5	15.7	0.8
Age when deafness occurred:							
Unknown	2,899	2,098	715	86	72.4	24.6	3.0
Indefinitely stated	4,359	3,424	882	53	78.6	20.2	1.2
Definitely stated	77,103	64,343	12,189	571	83.5	15.8	0.7
Birth	12,791	11,373	1,180	238	88.9	9.2	1.9
After birth, under 2	7,168	6,547	532	89	91.3	7.4	1.3
2 and under 5	10,083	8,853	1,114	116	87.8	11.0	1.2
Under 5	30,042	26,773	2,826	443	89.1	9.4	1.5
5 and under 10	6,567	5,559	972	36	84.7	14.8	0.5
10 and under 15	4,152	3,550	591	11	85.5	14.2	0.3
15 and under 20	3,852	3,348	492	12	86.9	12.8	0.3
Under 20	44,613	39,230	4,881	502	87.9	11.0	1.1
20 and under 40	16,068	13,162	2,868	36	81.9	17.9	0.2
40 and under 60	9,107	6,831	2,255	21	75.0	24.8	0.2
60 and under 80	6,375	4,454	1,912	9	69.9	30.0	0.1
80 and over	942	666	273	3	70.7	29.0	0.3
Present age:							
Under 20	16,702	15,507	835	360	92.8	5.0	2.2
20 and over	67,397	54,183	12,910	304	80.4	19.2	0.
Unknown	262	175	41	46	66.8	15.6	17.6

racial difference in the susceptibility to deafness. While the census returns seem to support this hypothesis, the factors of uncertainty are so large as to deprive the results of value, and it is probable that the returns themselves are defective regarding the colored races.

Nativity of whites.—Out of a total of 89,287 persons returned as deaf, 84,361 were white; and of these, 69,865 were native, 13,786 were foreign born, and in 710 cases the nativity was unknown (Table 2).

Table XXVII relates to the sex, race, and nativity of the deaf, as compared with the whole population of the United States; and Tables XXXIV, XXXV, and XXXVI [1] relate more particularly to nativity, and show the proportion native and foreign born among the white deaf, as follows:

Table XXXIV shows, for the white deaf, the number and percentage of native and foreign born, by age when deafness occurred, degree of deafness, ability to speak, sex, and present age.

TABLE XXXV.—*Number and per cent of white deaf, by nativity and causes of deafness.*

CAUSE OF DEAFNESS	NUMBER				PER CENT		
	Total	Native	Foreign born	Unknown	Native	Foreign born	Unknown
Total	84,361	69,865	13,786	710	82.8	16.4	0.8
Causes of deafness:							
Affections of external ear	807	638	165	4	79.1	20.4	0.5
Affections of middle ear	33,968	29,033	4,768	167	85.5	14.0	0.5
Affections of internal ear	11,666	10,106	1,467	93	86.6	12.6	0.8
Unclassified	28,467	23,104	5,055	308	81.2	17.7	1.1
Unknown	9,453	6,984	2,331	138	73.9	24.6	1.5
Principal assigned causes:							
Scarlet fever	7,329	6,389	887	53	87.2	12.1	0.7
Disease of ear	3,993	3,625	345	23	90.8	8.6	0.6
Measles	2,397	2,135	242	20	89.1	10.1	0.8
Influenza	1,740	1,417	314	9	81.4	18.1	0.5
Catarrh	11,568	10,047	1,496	25	86.9	12.9	0.2
Colds	2,967	1,954	1,007	6	65.9	33.9	0.2
Malarial fever and quinine	1,439	1,296	139	4	90.1	9.6	0.3
Meningitis	3,824	3,648	118	58	95.4	3.1	1.5
Brain fever	1,965	1,703	251	11	86.7	12.8	0.5
Typhoid fever	1,961	1,516	432	13	77.3	22.0	0.7
Congenital	12,789	11,371	1,180	238	88.9	9.2	1.9
Old age	3,181	2,081	1,094	6	65.4	34.4	0.2
Military service	3,130	2,517	609	4	80.4	19.5	0.1
Falls and blows	2,046	1,473	558	15	72.0	27.3	0.7
Sickness	1,907	1,348	543	16	70.7	28.5	0.8
Fever	1,318	1,087	219	12	82.5	16.6	0.9
Hereditary	894	791	98	5	88.5	11.0	0.5

[1] Omitted from this republication.

Table XXXV shows, for the white deaf, the number and percentage of native and foreign born, by causes of deafness.

Table XXXVI shows, for the white deaf, the number and percentage of native and foreign born, by States and Territories.

The statistics of Table XXVII indicate that out of the total white population of the United States, 84.7 per cent were native and 15.3 per cent foreign born.

Table XXXIV shows that of the white deaf, 82.8 per cent were native and 16.4 per cent foreign born, so that it appears that the proportion foreign born among the white deaf is slightly in excess of the proportion foreign born in the total white population.

In the case of the white deaf, the proportion foreign born is greater among those deaf from adult life than among those deaf from childhood. It is also greater among the partially than the totally deaf, and slightly greater among males than females. In regard to age when deafness occurred, the proportion foreign born is greatest among those who lost hearing between 60 and 80 years of age and after, least among those who became deaf before 20, and intermediate in the intervening age periods when deafness occurred.

In regard to present age, the proportion foreign born is greater among those over 20 years of age than under. In relation to ability to speak, the proportion foreign born is greatest among those who speak well, least among those who speak not at all, and intermediate among those who speak imperfectly.

In regard to classified causes of deafness (Table XXXV), the proportion foreign born is greatest among those deaf from colds (33.9 per cent), and it is also great among those deaf from typhoid fever (22 per cent) and influenza (18.1 per cent), and least among those deaf from meningitis.

In relation to unclassified causes of deafness, the proportion foreign born is greatest among those deaf from old age (34.4 per cent), and large among those deaf from falls and blows, and from the indefinite cause sickness.

Table XXXVI relates to the geographic distribution of the white deaf, distinguishing the native from the foreign born. The proportion foreign born is of course greatest in those parts of the country which have the largest foreign born population.

The majority of the foreign born deaf became deaf in adult life, and it is therefore probable that in most cases the deafness occurred after they reached this country. This also accounts for the fact of the small proportion of foreign born among the deaf from

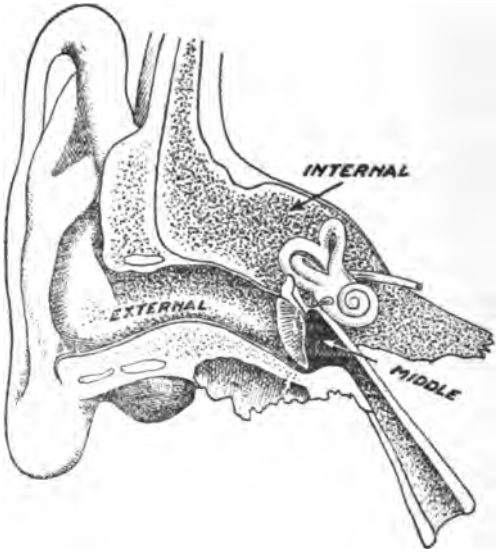
meningitis and scarlet fever, for these are diseases characteristic of childhood rather than adult life.

The process of audition, and the mechanism whereby it is effected.—Diagram 31 presents a sectional view of the human ear, and Diagram 32 an enlarged plan of the organ of hearing.

A source of sound may be considered as consisting essentially of an oscillating body immersed in air.

Considering the to and fro movements which take place toward or from the listener's ear, we may note that each time the movement is toward the ear the air particles in the immediate vicinity are

DIAGRAM 31.



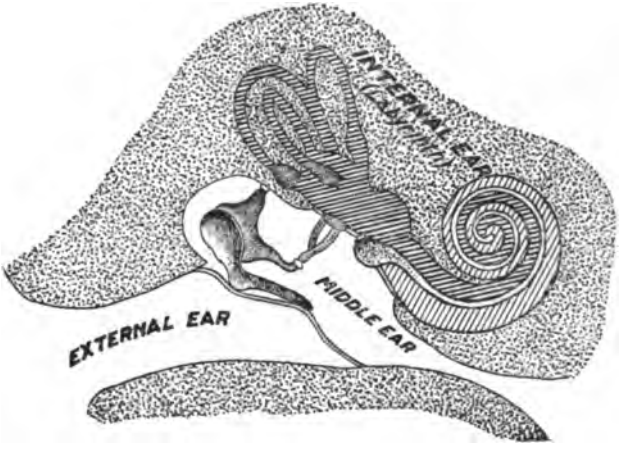
struck a blow in the direction of the ear, much as a billiard ball might be struck by a cue. They shoot off under the impulse in the direction of the ear, but can go only a very little way before they are arrested by collision with other air particles which take up the movement. Much as an impulse may be transmitted through a line of billiard balls by successive collisions of ball with ball, so the aerial impulse is transmitted through the free air by successive collisions of air particles with air particles. When the impulse finally reaches the listener's ear the air particles in the external ear are crowded together by the shock and are thus condensed in the passageway, or

meatus, causing increased pressure upon the drum membrane of the ear, pushing it in a little way (Diagrams 31 and 32).

When the motion of the oscillating body is from the ear an opposite effect is produced, resulting in rarefaction of the air in the external ear, causing a lessening of pressure upon the drum membrane.

A source of sound thus operates to produce alternate condensations and rarefactions of the air in the external ear, causing vibratory movements of the tympanic membrane. The membrane moves inward when the air pressure is increased and outward when it is diminished.

DIAGRAM 32.



The middle ear contains a mechanism for transmitting the vibrations of the membrane to the liquid contained in the internal ear (Diagram 32). This consists of a series of small bones, or ossicles, of which the malleus, or hammerhead, is attached directly to the tympanic membrane. The stapes, or stirrup-shaped bone, at the other end of the series acts somewhat like a piston. Its flat end is attached to a membrane covering the oval opening into the labyrinth. The transmitting mechanism of the middle ear thus consists essentially of a piston operated by a stretched membrane. When the tympanic membrane moves inward, the stapes, or piston, is also pushed inward, thus exerting increased pressure on the liquid in the labyrinth. When

the tympanic membrane moves outward the pressure on the liquid is relaxed.

The liquid contained in the internal ear is thus subjected to changes of statical pressure; but in the coiled-up portion of the labyrinth known as the cochlea, or snail shell, there is also a to and fro movement of the fluid itself, resulting from the elasticity of the membrane covering the second opening into the labyrinth (the round window). The passageway of the cochlea is divided longitudinally into two distinct channels communicating only at the tip—shaded differently in the drawing (Diagram 32). When, therefore, the stapes, or piston, is pushed in at the oval window, an actual displacement of the fluid in the cochlea takes place, traveling up one channel and down the other and bulging out the membrane of the round window. The to and fro movement of the liquid in the cochlea causes a corresponding movement of the hairs, or rods, that line the passageways, and which are connected with the terminals of the auditory nerve.

There can be little question that the true organ of hearing is located within this coiled-up portion of the labyrinth (Diagram 32), but its exact nature and mode of operation are obscure.

The organ of Corti, which is found here, bears a curious resemblance to a musical instrument containing multitudes of rods of different lengths, which are supposed to be tuned to respond to different pitches of sound—a sort of harp in miniature within the ear. The single vibration which alone is transmitted to the internal ear—the resultant of all the sonorous vibrations that exist in the air outside of the ear—is supposed to be here analyzed into its constituent musical elements by the sympathetic vibration of those rods of Corti which correspond to them in pitch. The organ of Corti, however, may not be so essential to hearing as is commonly supposed, for it seems to be totally wanting in parrots and other birds that imitate, and therefore perceive, the sounds of human speech.

At the other end of the labyrinth from the cochlea, the curious arrangement of the three semicircular canals is worthy of note (Diagram 32)—an arrangement in which the plane of each canal is substantially at right angles to the planes of the other two, thus reminding us of the three planes used by mathematicians in co-ordinating directions in space.

The semicircular canals do not seem to be concerned in the process of hearing, although it is obvious that they constitute a

sense organ of some kind, because they are plentifully supplied with nerve filaments connected with hairs, or rods, as in the case of the cochlea. Under the influence of sound vibrations transmitted to the liquid of the internal ear by the to and fro movement of the stapes at the oval window, the liquid in the semicircular canals is subjected to changes of statical pressure, but without the to and fro displacement of the fluid, as in the case of the cochlea. If, however, the head should be moved in any direction, displacements would be produced by the inertia of the fluid. These displacements would differ in the three canals, according to the direction and extent of the movement. It is probable that the semicircular canals constitute a special sense organ, whereby we perceive the direction and extent of bodily movements. After waltzing continuously a sensation of dizziness is usually experienced for some time after stopping, which is probably due to the continued movements of the liquid in one of the canals. Many totally deaf persons fail to experience any sensation of dizziness under such circumstances; and they experience a difficulty in walking steadily in the dark. It is probable that in such cases the injury to the ear has extended to the semicircular canals, so that the persons have lost the use of an organ intimately connected with the instinctive balancing of the body while in motion.

The true organ of hearing seems to be hidden away in the convolutions of the cochlea; but, as it is immersed in a liquid, it is not directly accessible to sound vibrations. The capacity for hearing may exist, and yet the person may be deaf on account of some defect in the transmitting apparatus. Perfection of hearing, therefore, depends upon the proper functioning of the tympanic membrane and the transmitting mechanism of the middle ear.

The tympanic membrane must be suitably stretched in order to be sensitive to delicate changes of air pressure in the external ear. It differs from an ordinary stretched membrane in not being flat. It is somewhat conical in shape with the concavity outward, thus resembling, to a certain extent, the under surface of an open umbrella. It can be stretched to a greater or less degree by movements of the malleus, to which it is attached. A very slight movement inward of the end of the malleous increases the tension; and the act of listening consists in the adjustment of certain muscles attached to the malleus, whereby the proper tension of the membrane is secured. There is thus an accommodation of the ear to feeble sounds comparable to the accommodation of the eye for near vision—an adjustment of the focus, so to speak.

A stretched membrane is most sensitive to transitory impulses when the normal pressure of the air is the same on both sides of it. The pressure of the air within the middle ear tends to push the tympanic membrane outward, and the pressure of the air in the external ear tends to push it inward. When these opposite pressures just balance one another the membrane is free to be acted upon by the transitory impulses of sound without being impeded by an unbalanced pressure from within or without. The external pressure of the atmosphere is subject to change; and without some means of introducing air into the middle ear or removing air from it when necessary, the tympanic membrane would constantly be working at a mechanical disadvantage on account of unbalanced pressures. The Eustachian tube affords the means. Through its agency, a communication is established between the middle ear and the back part of the mouth (the pharynx). During the act of swallowing saliva the end of the Eustachian tube in the pharynx is opened, thus permitting free communication between the external air and the cavity of the middle ear, resulting in equilibrium of pressure on both sides of the tympanic membrane. The Eustachian tube also serves as a drainage tube for the middle ear, preventing secretions from accumulating there.

(*To be continued.*)

THE DOUBLE-HAND ALPHABET.

JULIA A. FOLEY, MT. AIRY, PHILADELPHIA, PA.

Every deaf person, who has to make his way alone among hearing people outside those of his own family, should acquaint himself with the double-hand alphabet, as is fully illustrated in the December, 1906, number of the ASSOCIATION REVIEW. His ability and willingness to read this form of spelling will make him many friends, who would otherwise shrink from addressing him, and three-fourths of the intelligent hearing people one meets can spell with both hands and are willing to attempt a few sentences, but are disgusted if a deaf person fails to understand. We often marvel at people for preferring the double-hand alphabet to the more simple and convenient single-hand that attracts less attention, but when we think of the laws that govern the motions of the body the mystery is cleared up.

It is unnatural to move one hand or arm without moving the other, and whenever we do so, we perform the double task of moving one hand and keeping the other still.

This is one reason why the deaf, who are perfectly able to spell a whole sentence, will spell part of it, and then break off suddenly, finishing in signs. Nature, unconsciously to them, rebels against the tedious restraint of keeping one hand still while the other is moving.

Another illustration of this law is writing on the typewriter; though both hands are kept going at the same time, and move faster and through more space than when writing with a pen, the former way of writing is much the easier, not only because both hands are kept in motion, but because they move in opposite directions—one up, the other down; and this is another law governing the motion of our hands and arms. They move naturally in opposite directions, and in spelling with both hands this law has full play, more so than when making signs.

Then again, when one thinks of the alphabet, his first thought is of the large Roman letters he was first introduced to, and all these letters except "I" and "O" are made up of two or more lines. In

trying to make those letters with our fingers, nature comes forward again, calling unconsciously on one hand to help the other, and thus one learns to spell with both hands with less mental effort than is required to make the single-hand alphabet, and as we are all mentally lazy to a certain extent, it follows that people will take to the easier of the two alphabets. It is hardly necessary to say that letters made with both hands are the easier to read and the strain on the eye is less. While "k," "p," and "d" of the one-hand spelling keep one guessing, those made with both hands are so large that he must indeed be dull who cannot read them at a glance.

TEACHING LIP-READING AS A PROFESSION FOR THE HARD OF HEARING.

MILDRED KENNEDY, BOSTON, MASS.

Deafness among the American people is growing more and more in evidence every year. A generation ago it was unusual to hear of a deaf person. The term *deaf* had not come into common usage. A few old people might be found who were called "hard of hearing," but their condition was looked upon rather to be expected than otherwise.

Today, any one, in any class of society, rich or poor, high or low, young or old, could, if asked, name at least one person who is growing, or, more often, is already quite noticeably deaf. This deafness is quite as prevalent among persons who are young or middle-aged—that is, from twenty to sixty—as among older persons.

This means that a large number of self-supporting men and women are struggling under the burden of deafness. Many of them are often obliged to resign positions of responsibility and good pay because this deafness makes it impossible for them to fulfill the requirements which they otherwise are competent and well-fitted to carry on. In some cases the deafness comes on so gradually that the victim does not realize it until friends or associates call attention to the fact that the response is not so ready as it used to be. Then for some seeming slight or trivial cause an aurist is consulted, and the report from his examination shows the hearing to be much below normal. A large percentage of what is called absent-mindedness is, in reality, unconscious deafness.

The effect which deafness has upon one all who experience it best understand. The desperate realization that the long years of patient privation and struggle which have been spent in order to become fitted to enter some profession or trade have all been useless, that seemingly both time and money have been thrown away, is a frightful awakening to any one who wishes to be self-supporting. The deaf too often feel that they are a burden both to themselves and to society at large.

The first step which a deaf person must take when facing this crisis in his life is to realize the necessity of bearing the burden silently and courageously, learning to adapt himself to his new conditions by accepting its limitations, striving to live his life within these limitations with patient courage, looking about him to find what niche in the world he can fill, and believing that there is a place somewhere for each one, and the sooner one finds one's respective place the better for all.

There is a new field for work that has been opened up in the United States that is especially adapted for those who are hard of hearing—that is, Teaching Lip-Reading.

The credence of this being a really practical undertaking may at first seem difficult to believe. It looks too much like "the blind leading the blind," and as if "both must surely fall into the pit." Yet it has already been proved practical and possible. For five years such a teacher has been doing a work in Boston, Massachusetts, that I am convinced is unequalled anywhere in the United States. With a facility in lip-reading which enables her to intelligently follow the movements of the pupils' lips and her keen understanding of the difficulties, she possesses a wonderful appreciation of how to overcome the many obstacles at hand.

It is most encouraging for the pupil to study with a teacher who is deaf, for there is an ever-present illustration of what has been and can be done. The pupil sees that the teaching is not simply theory, for the deaf teacher puts into constant practice the theories which she gives the pupil, and the pupil sees for himself the results which the theories have produced. Each lesson brings renewed hope and courage. The deaf need encouragement, all they can get, for the *dis*couragement that is coupled with deafness is one of the principal difficulties to be overcome.

Miss Martha E. Bruhn has been so successful in her teaching that she has now added to her school in Boston Normal Courses to fit others to teach and represent "The Müller-Walle Method" in

other States than Massachusetts. These Normal Courses, although opened to both deaf and non-deaf pupils, are especially fitted for those who are deaf.

Miss Bruhn's course in lip-reading is so thorough that in a short time any intelligent conscientious student can become sufficiently skilled as a lip-reader to begin the Normal Course. For one who takes up the study with enthusiasm and determination, it is only a question of months before he completes both courses. Then he is prepared to enter upon a field which has today in the United States unlimited opportunities for success and growth.

When we consider the years that must be spent in order to become sufficiently proficient to teach music, languages, or any of the arts, the time spent to acquire a skill and knowledge in lip-reading seems indeed surprisingly short. The results attained and the confidence and courage the student feels as he becomes more and more skilled brings much real satisfaction.

This article is written to those who have become deaf, with the desire to call to their notice the possibilities which the future holds for *them.* The writer is herself one who has been fortunate enough to study with Miss Bruhn, watching with interest and joy the unfailing satisfaction which this method brings the pupils as they progress.

THE STUDY OF THE DEAF CHILD: BEING A RESEARCH ON DEAF-MUTISM.[1]

By James Kerr Love, M. D., Glasgow, Scotland.

Part II.

What was stated in the first paper amounts to an indictment of the present arrangements for the education of the deaf and dumb. The charge is not against one school, nor the schools of one country, but against nearly all existing schools, and it consists in this, that for want of careful clinical investigation into the physical conditions present in young deaf children, these latter are often wrongly treated and their education bungled. Let us see now what such a careful clinical scrutiny brings out.

The medical examination of school children is in the air just now. It is a part of the English Education Bill of the present Government. It has been introduced almost as an after-thought at the suggestion of the British Medical Association. The discussion on the Bill from this distance sounds like the din of a religious war. But the clause compelling the medical examination and supervision of children attending elementary schools is, perhaps, the most important part of this bill. If properly carried out, this examination and supervision of school children will nip in the bud most epidemics of scarlet fever, whooping cough, and diphtheria, largely control the ravages of measles and influenza, and have a helpful influence in the crusade against tuberculosis. Hard of hearing and hard of seeing children will, by the timely removal of adenoid growths and the fitting of their defective eyesight with glasses, be in many cases changed from dull to bright scholars; and every child will become a little missionary of hygiene to the household in which he lives. It is just possible that the incidence of adventitious deaf-mutism may be profoundly altered, and that hardly any but the congenitally deaf will ask admission to our institutions. But that will be one of the later results of the medical examination of the children of the elementary schools.

The schools for the deaf will no doubt be included in this medical examination and supervision, but as these are for the most part residential institutions already conducted on sanitary principles, medical supervision by Government will produce little alteration or improvement in their general manage-

[1]A reprint in chief part of a pamphlet issued under the title: "Carnegie Trust Research. The Study of the Deaf Child, being a Research on Deaf-Mutism, conducted by James Kerr Love, M. D., Aural Surgeon, Glasgow Royal Infirmary; Aurist, Glasgow Institution for the Education of the Deaf and Dumb. Printed by Alex. Macdougall, 68 Mitchell street, Glasgow. 1907." For Part I, see the December, 1906, number (Vol. VIII, No. 5) of the Review, under the title, "A Report on Visits to European and American Institutions."

ment. Mr. Addison and I have shown that in the institution at Langside the children are so well cared for that although they come from the poorer classes, and many from the poorest classes, they surpass in physique, after a few years' residence, the children even of the better board schools.[1] But the examination of the eyes, nose and throat, and of the ears is part of the proposed Government examination, and it is here that a greater improvement will be effected in the schools for the deaf than even in the elementary schools. It is therefore with the special organs of hearing, speech, and sight that this part of the inquiry chiefly deals.

The Special Senses in Deaf Children.

The eye and the ear are the two great "gateways of knowledge," regarded from the educational point of view. The sense of touch, though less consciously employed, is hardly of less importance. It is by the sense of touch, associated with the "muscular sense," that both the hearing and the deaf child place accurately the tongue for the production of different sounds. Taste and smell, except in the blind-deaf, are quite secondary in their educational value. In these latter, however, they become exalted in value to a marvelous degree. Recently the writer spoke with Miss Helen Keller for the greater part of a day without any difficulty. By placing her thumb on his larynx, and spreading her fingers over the side of his face, she lip-read, or rather face-read, all he said, with hardly any difficulty. During a walk of several miles she identified leaves, blossoms, &c., picked up from the ground, by the senses of touch and smell.

In spite of the loss of sight and hearing, this charming woman seems to discern more than most of us who have eyes and ears. In one of her early letters she says: "The mountains are crowding round the springs to look at their own beautiful reflections." In speaking of Boston Common (a fine public park in the city), she says: "Somehow after the great fields and pastures and lofty pine-groves of the country, the scene here seems shut in and conventional. Even the trees seem citified and self-conscious. Indeed, I doubt if they are on speaking terms with their country cousins. They are like the people whom one sees every day who prefer the crowded city to the quiet and freedom of the country. They do not even suspect how circumscribed their lives are. They look down pityingly on the country folk who have never had an opportunity to see the great world. O, my! if they only realized their limitations, they would flee for their lives to the woods and fields."

Speaking of her delight in books, she says: "Here I am not disfranchised. No barrier of the senses shuts me out from the sweet, gracious discourse of my book friends; they talk to me without embarrassment or awkwardness."

And yet Helen Keller lost her sight and hearing completely when she was but 19 months old. She is an exceptional, a wonderful woman, and with this remark most people dismiss her case as having no bearing on the education of the ordinary deaf or blind child. I shall take up this question later, and try to show that her case has a very clear lesson for educators of the deaf.

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[1] *Deaf-Mutism* (MacLehose, Glasgow), 1896.

Meanwhile, let us say a short good-bye to her in the words of the American poet Steadman—

"Pity thy unconfined
Clear spirit whose enfranchised eyes
Use not their grosser sense?
Ah, no! thy bright intelligence
Hath its own Paradise,
A realm wherein to hear and see
Things hidden from our kind.
Not thou, not thou, 'tis we
Are deaf, are dumb, are blind."

The Eyesight in Deaf Children.

The ordinary deaf child, however, must have good eyesight if he is to learn well. The rapid manipulation of the fingers in hand-spelling, and the still more rapid and delicate movements of the mouth, require good eyes if hand-reading or lip-reading is to be done by the deaf child. Good eyesight is also necessary if the writing and figures of the blackboard are to be understood. But it would seem that deaf children seldom see perfectly. In this respect they are worse than hearing children. Amongst the latter the proportion of those having defective vision varies a great deal, being small as a rule in country schools, higher in city schools, and almost always higher in the upper than in the lower classes.[1]

The number of children in hearing schools having defective vision seems to vary from 10 to 40 or 50 per cent. But amongst the deaf children at Langside almost two out of three have defective vision, even when the ordinary standards are not very rigidly insisted upon.

Some months ago the teachers were asked to report on the general intelligence of the children in class, and to note any cases of bad eyesight. Out of an attendance of 170, 16 per cent. were reported as having bad or poor sight. More recently each class-room was provided with a set of Snellen's types, and the teachers were instructed how to test each eye separately. Of 172 children on the roll, 143 were considered sufficiently acquainted with letters to have the test applied. Eighty-six (or 61 per cent.) of these were defective in one or both eyes. To enable these children to do their work efficiently almost all must be fitted with spectacles. How many cases of "poor intelligence," "bad progress," &c., would disappear, or how many duffers would be turned into bright children were these eye-defects corrected, I cannot tell, but it is quite safe to assert that such changes would occur.

The Remaining Hearing in Deaf Children.

In searching for and mapping out the remaining hearing, the plan adopted was to begin at the top of the school and work downwards till 100 children had been examined. There are about 170 children in the school, but it was decided to limit the inquiry to 100 for two reasons—(1) The youngest children have not sufficient education to appreciate the tests; and (2) the time spent over the work was very great, each child requiring for the ear tests alone about an hour and a half. Often, however, two children were examined at once. The time occupied by this part of the inquiry was three winters. The subject of the inquiry was "the Semi-deaf and Semi-mute in our Institutions

[1] *British Medical Journal*, 22nd September, 1906.

for the Education of the Deaf and Dumb," and the subject was chosen by the writer because during his long work amongst the deaf he had become convinced that these were at present not properly taught.

Perhaps no more unfortunate time could have been chosen than the present for making out a strong case for this separate and special treatment of the semi-deaf and semi-mute. These two classes are drawn chiefly, though not entirely, from the subjects of acquired deafness—those who have been born hearing. Now, at Langside, and indeed generally amongst deaf-mutes, children who are admitted for tuition consist of about half born deaf and half born hearing. Amongst the 100 children examined the proportions are as nearly as possible two-thirds born deaf and one-third born hearing. The result is that the proportion of semi-deaf and semi-mute children is under the average, and the case for the semi-deaf child is therefore understated. Amongst the 100 children examined there are even curious variations in the incidence of congenital and acquired deafness. Amongst the first 50 the half

FIG. 1.

and half ratio is almost maintained. Amongst the last 50 about three-fourths are born deaf. There is, however, a return to the normal ratios for the children admitted during the winter 1905-1906—not here dealt with—for out of 24 children admitted 12 were born hearing.

Watches, acoumeters, whispered speech, and in most cases speech in conversational tones, are useless in the discovery of the remains of hearing in the deaf or dumb. Were this not so, deafness would not involve mutism. The clapping of hands, the ringing of bells, the loud shouting of vowels, and sometimes of consonants, elicit evidence of hearing from many deaf-mutes. Stamping on the floor is a fallacious test, for appreciation of the molecular disturbance transmitted to the body and the bones of the head is no evidence of hearing. Whatever the tests used, they must be applied under the following conditions:

When *the voice* is used as a test, the ears must be tested separately, and precautions must be taken against lip-reading. All very deaf people lip-read

to some extent, and some, even the untaught, lip-read to a very great extent. The test words or vowels should be pronounced either behind the child's back, or his eyes should be covered by the surgeon's hand. For the practical purposes of the teacher, testing by the voice is by far the most valuable method. If a child cannot hear the sounds of the voice, it does not much matter what he hears above or below in the musical scale.

For the demonstration of the presence of aërial hearing, the writer has found a *large bell* the best instrument (Fig. 1). The blindfolded child is made to count the strokes, delivered singly or at short intervals. The bell used is a large dinner bell, with a spring tongue attached at the junction of the handle and the bell, and so arranged that a violent shake produces a sound of great intensity. In the open air this bell can be heard at a distance of

FIG. 2.

over 1,000 yards. Such a bell is not only capable of emitting very loud sounds, but, being rich in overtones, represents a very large part of the musical scale.

A single large tuning-fork may be used for testing for the presence of hearing in deaf-mutes. It may be used either in the air or on the mastoid process. Although the fork thus used brings out in a few cases evidences of hearing which have not been discovered by the voice, its use is very limited, because it represents only one tone without overtones, and because it requires a very intelligent deaf-mute to appreciate the conditions of the experiment. On the mastoid, *tremor* is apt to be taken for *sound*. But for mapping out areas of hearing in the ears of deaf-mutes, it will be seen that the tuning-fork is of special value.

The tests used in this inquiry were Bezold's continuous tone series, made by Edelmann, of Munich. This series consists of fourteen tuning-forks, two whistles or pipes, the pitch of which can be varied by means of a movable stopper, and the modification of Galton's whistle, made by Edelmann (Figs. 2 and 3). The pitch of the forks is varied by movable clamps. The whole series supplies tests ranging from 16 vibrations per second to over 50,000

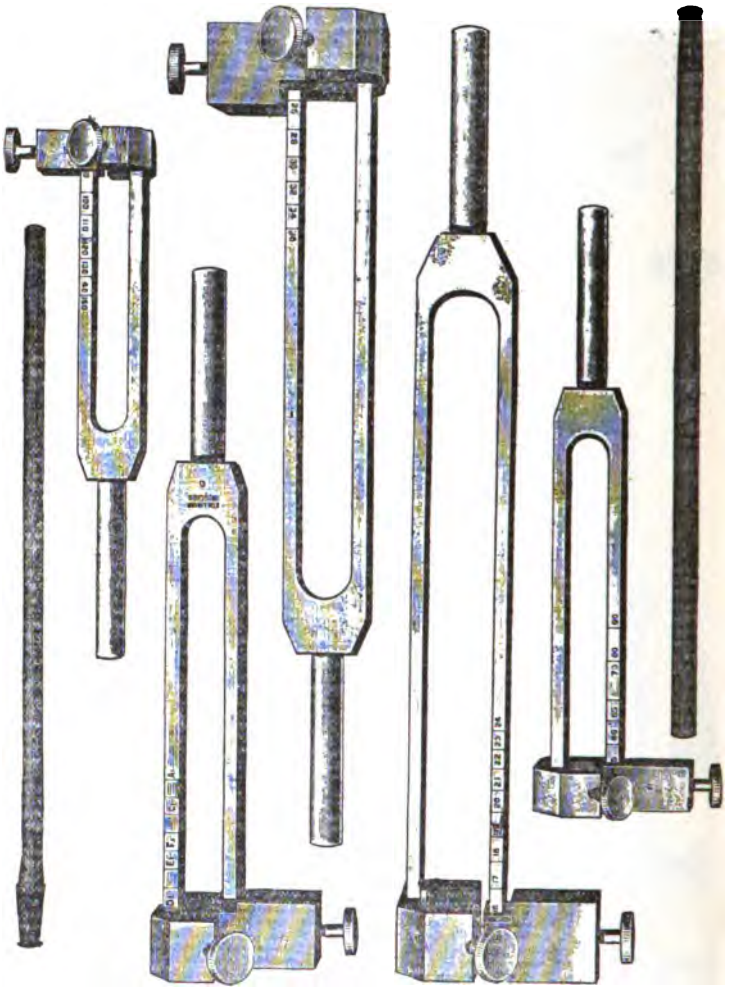

FIG. 3.

vibrations. The time needed for testing one child is about one hour and a half. It is possible to examine two or even three children at a time, but this means additional precaution to insure accuracy, and prolongs the period of examination.

The ears were tested separately, the ear not under examination being stopped thoroughly by a finger. The forks were struck and the whistle made

to sound behind the child being tested; and control tests in which no sound is produced were used to make sure that the answers were reliable. An experienced teacher, usually Mr. Addison (the Principal of the Deaf and Dumb Institution, Glasgow), was seated before the children, to interpret the appreciation for tests used.

This being an inquiry chiefly into the condition of the semi-deaf and semi-mute, these two terms had better be defined now.

The classification adopted by the Royal Commission on the Deaf,[1] and generally adopted by writers on deaf-mutism, is as follows:

1. Those who are congenitally deaf and are consequently dumb.

2. Those who become deaf after birth—acquired or adventitious deafness—comprising these two classes: (*a*) Those who become deaf before acquiring speech—say before 2 years of age; (*b*) those who become deaf after acquiring speech, and who continue to speak in virtue of the unforgotten speech of the earlier years—the semi-mute.

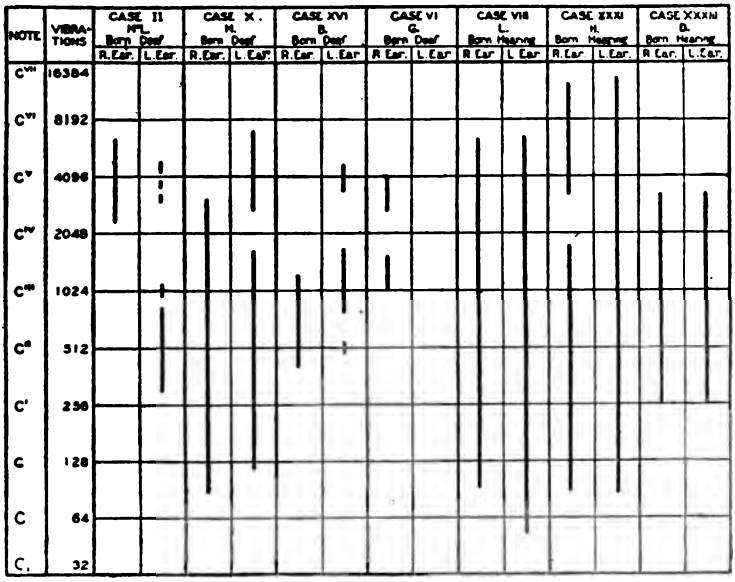

FIG. 4.—SPECIMEN CHART OF HEARING ISLANDS IN CONGENITAL AND ACQUIRED DEAF-MUTISM.

3. Those who possess so much hearing power that they hear, and to some extent distinguish, the sounds of the human voice—vowels, consonants, or even some words—the semi-deaf.

There is, for teaching purposes, no practical distinction between the congenitally deaf defined under heading 1, and those classed under (*a*) of heading 2. Both are the subjects of "surdism," or have that amount of deafness which prevents the development of speech. But (*b*) of heading 2—the semi-mute—should, for practical purposes, be classified separately, or grouped with heading 3, because their speech depends on hearing which does exist or has existed. A better classification of the deaf, therefore, would be—

1. The subjects of "surdism." Those congenitally deaf or becoming deaf so early in life that no speech will develop apart from special tuition.

[1]Report presented to both Houses of Parliament, 1889.

2. The semi-deaf and semi-mute. The former have some speech in virtue of their power to distinguish the separate tones of the human voice; the latter may have no hearing at all, but speak in virtue of the hearing and speech present before deafness occurred. It is generally assumed that the semi-deaf belong wholly to those having become deaf adventitiously. Most of them do so, but a few, as we shall see, belong to those *congenitally* deaf.

During the first winter of this research the hearing of 33 children was mapped out. As these have been already published,[1] a short synopsis only will be given here.

1. Sixteen of the 33 children were born deaf and 15 born hearing, whilst with regard to two cases the state at birth is doubtful.

2. None of the 15 acquired cases had any deaf-mute relatives; 8 of the 16 congenital cases had amongst them 16 deaf-mute relatives, and these are almost all closely related to the deaf child.

3. Every congenitally deaf child had some remnant of hearing, whilst 6 of the acquired cases were quite deaf in both ears, and 2 quite deaf in one ear. But where hearing existed in the acquired cases it was better as a rule than in the congenital cases.

4. In none of the congenital cases did otoscopic examination discover any gross destructive lesion of the middle ear. In 12 of the 15 acquired cases there was loss of the whole or part of the membrane, loss of ossicle, or scar of old perforations.

5. There were 7 semi-mute and 7 semi-deaf children amongst the 33 children examined. The semi-mute cases were all, of course, found amongst the children whose deafness had been acquired, but 1 at least of the semi-deaf children was found amongst those born deaf.

[Detailed and full description is given, in this report and in an accompanying appendix, of cases of deaf-mutism, examined with reference to the amount and character of hearing possessed. Of the one hundred cases described, space permits the giving in this reprint of only the seven which are illustrated in the Specimen Chart of Hearing Islands in Congenital and Acquired Deaf-mutism (Fig. 4). These seven cases follow.—EDITOR.]

CASE 2.—Robert McL., æt. 17. Born deaf, and has two deaf-mute brothers. Both tympanic membranes retracted, the right chiefly above the short process of the malleus, and the left in the membrana tensa, so that the malleus handle is indrawn. In this case there is a single hearing island in the right ear, extending from about e^4, to g^5, fully an octave. On left side a series of hearing islands exists. The lowest is from e^1 to g^2, then there is a gap till c^3 is heard, then another gap of nearly two octaves to g^4, between which and d^5 three small islands of hearing exist. Has no hearing for speech, and no speech.

CASE 6.—Samuel G., æt. 17. Born hearing. (Again the cause of deafness said to have been a fall downstairs. But as this happened at 4 years, there is no reason to doubt that the boy was born hearing.) Both tympanic membranes are intact, though perhaps retracted, and the throat is normal. There are two small hearing islands in the right ear, the lower from c^3 to g^3, another from f^4 to c^5. No scrap of hearing could be discovered in the left ear. He has no hearing for voice. He reads fairly well, but as his voice is breaking, its intonation cannot be judged of.

CASE 8.—James L., æt. 16. Born hearing. In this case there is facial palsy on the right side, some discharge with perforation of the right tympanic membrane. There is a mastoid operation fistula behind the left ear, and there is no tympanic membrane on this side. There are strumous scars on the right side of the neck. He has a very large hearing island in the right ear extending from G to a^5, and in the left a still larger one extending from A_1 to a^5, then a gap to g^6, which is heard as an individual note. This boy hears all

[1] *Diseases of the Ear* (J. Wright & Co., Bristol), 1904.

the vowels, some of the consonants, but cannot distinguish sentences. He does not use his voice in speech.

CASE 10.—Alex. M., æt. 14. Born deaf. Both tympanic membranes and the throat are normal. There is one hearing island on the right side, extending from *G* to a^4. In the left ear there are two islands—the lower begins at *B* and extends to a^3, the higher from f^4 to a^5. Distinguishes the vowel *a*, but no consonants or sentences. He articulates fairly well, and the intonation of his voice is good.

CASE 16.—W. B., æt. 13. Born deaf, and there are two others in the family deaf and dumb. Both tympanic membranes are intact, but perhaps indrawn. There is only one hearing island on the right side, and it extends from g^1 to e^3. On the left there are three, a very small one at c^3, a larger one from g^2 to a_6, and a small one from *b* to d^6. Hears no sound of the voice. The speech is fairly distinct, and the intonation fair.

CASE 31.—James H., æt. 12. Born deaf. There is a scrofulous scar in the neck. Both tympanic membranes are normal. The tonsils and pharynx are somewhat thickened. There are two extensive hearing islands on the right side, the lower one from *G* to a^3, and the upper one from g^4 to g^6. On the left side there is one long island extending from *G* to a^6. In this case all the vowels are distinguished, most of the consonants, and many monosyllables. The reading is very good, and the intonation very good.

CASE 33.—Hector D., æt. 12. Had suppuration of the ears before time of speaking. Has hazy corneæ. Has discharge from right ear, and a perforation in the right membrane, in great part destroying it. The left membrane is for the most part gone, and adherent in its remaining parts to the internal tympanic wall. The throat is a little thickened, and he has a nasal catarrh. There are two co-extensive hearing islands, one in each ear, their limits being from c^1 to a^4. All the vowels are heard and distinguished, as well as some of the consonants, and some simple sentences. The reading is good, and the intonation good.

It seems doubtful whether any tabulation of the above [one hundred] cases would be useful. It seems likely to be more useful that the writer put down his conclusions as plainly as possible, and allow the reader to check these by reference to the cases themselves.

1. Of the 100 children examined, 62 were born deaf and 31 born hearing, whilst with regard to 7 the state at birth was doubtful.

2. With the exception of one family in which 1 was born deaf and 2 were born hearing, and in which the cause of deafness was known to be syphilitic, none of the cases of acquired deafness had any deaf-mute relative.

3. The 62 deaf-born children had 68 deaf-mute relatives, almost all in the closest relationship with them—father or mother, brother or sister.

4. There were 10 semi-mute and 10 semi-deaf children examined, together forming 20 per cent. of the whole number.

5. Entire absence of hearing is uncommon in congenitally deaf children. Amongst the 62 congenitally deaf children it occurred in 4 cases, whilst in 2 other children no hearing could be discovered in one ear. As some of those 6 children were very young, and may possibly have failed to appreciate the tests, hearing may yet be discovered at subsequent testing, but the results of this inquiry point to the conclusion that entire absence of hearing occasionally exists in the congenitally deaf.

6. Total absence of hearing is not uncommon in those whose deafness is post-natal or acquired, and is quite common amongst the semi-mute, whose speech is consequently a recollection of their earlier hearing years. On the other hand, the hearing of the semi-deaf is much greater than that of any other class of deaf-mutes, and these—the semi-deaf—are for the most part cases of acquired deafness. The hearing of the semi-deaf is often great enough to be profitably used in teaching.

7. The naso-pharynx of deaf-mute children is often diseased. Post-nasal adenoids, or enlarged tonsils, or both, are present in about two-thirds of them, and these hypertrophies are so marked in about one-third that they should be removed, because they interfere both with the general health of the children and with the development of their speech.

8. The eyesight of deaf children is often defective. Over 60 per cent. of the children at present in the Glasgow institution—these figures do not refer exclusively to the 100 cases dealt with in this research—have defective eyesight.

9. Ten to 15 per cent. of deaf children are so slow in class that they may be called "defective." It is not meant that these are "idiotic," for idiotic or imbecile children are not admitted to the institutions for the deaf. But some of them will fail to earn their livelihood by whatever system they may be trained. Some of them, on the other hand, show ability in the school workshop, and have their intelligence quickened by "trades" training in their later years. Some of these class defectives might be helped by improving their eyesight. But a class amongst deaf-mutes must be recognized as true degenerates or defectives.

This inquiry being, in part at least, a plea for the teaching of speech to the semi-deaf and semi-mute, it may be well to look a little more closely at that class to whom, according to the writer's idea, speech should *not* be taught.

The number of children in Glasgow who may be classed as defective is not great enough to enable one to draw safe conclusions as to their management, and there is in Glasgow no experiment going on in the treatment of defective deaf-mutes. But in London the number of deaf-mute children under instruction is larger than in any community in the world, and the defectives are separately educated.

Within the London area and under tuition by the London County Council in day schools and in institutions there are 620 deaf children, whilst at evening schools there are 307. The system of teaching is oral throughout, except at the Homerton school, which is a combined school for defective-deaf children of both sexes, and of all ages up to 16 years. Excluding the evening schools (where the children are over 16 years), this Homerton school, containing, as it does, 70 children, represents about the usual 10 per cent. of defectives amongst the deaf (70 in 620). Of the 70 children, 40 are resident and 30 are day scholars. Of the 620 children attending the London day schools and resident in the three London institutions (Homerton, Annerley, and Oaklodge) there should be, and I am assured by Mr. Jones there are, 150 semi-mute or semi-deaf.

But the interesting fact for the purposes of this inquiry is that 21 semi-deaf children are attached to the Homerton School for Defective Deaf-mutes. If hearing and remaining speech are of the value and importance in education assigned to them by the present writer, this fact requires some explanation; and through the kindness of Mr. Barnes, the headmaster of Homerton school, Mr. Jones, the superintendent of the London County Council schools for the deaf, and Dr. Kerr, the Medical Officer of the London County Council, the writer is enabled to give a closer view of these 21 defective semi-deaf children in London. No fork tests are given, but the condition of the hearing is fairly well defined by stating that hardly any of the 21 children hear whispered words, whilst all hear and distinguish either sentences, words, or vowels spoken at distances varying from one to six paces. Of the 21, 11 are stated to have been born deaf, whilst 3 more have the cause of deafness put down as congenital syphilis. Of the remaining 7, the causes of deafness are given as scarlet fever (1), measles (1), polypus (2), inflammation of brain and convulsions (2), and malnutrition (1).

This is not the record of the partial destruction of hearing by post-natal disease, as semi-deafness usually is; it is the record of mental deficiency associated with congenital deafness. But a further investigation into the 21 defective semi-deaf children of London reduces their number considerably. Five of them are not mentally defective at all, but have come to Homerton

because their education has been bungled. They have been kept at ordinary hearing schools—where no provision for their hardness of hearing existed—till the ages of 12, 13, or 14 years, and now they cannot take their place even amongst the more heavily handicapped and deafer children. Mr. Barnes, the headmaster at Homerton, hopes to transfer some of these children to Annerley or Oaklodge, the London residential schools for older boys and girls.

Eleven of the 21 children have bad eyes, several being almost blind. Three cases of "aphasia and word-blindness" are given. So that when the defective semi-deaf children of the London area are critically considered they are found to form a very small class, and to consist chiefly of mentally defective children, for the most part congenitally deaf, with only 4 or 5 children from that class which forms the bulk of the semi-deaf, viz., children born hearing who have become partially deaf from post-natal disease. And the visitor to the school reads "defective" across the face and in the work of every class. The stigmata of degeneration are seen everywhere—microcephalics, almost blind children, cases of congenital syphilis, undergrown and badly-developed children are common. And yet these are the children who in almost every school in almost every country in the world are being educated alongside the semi-deaf and semi-mute, who are but little removed from the ordinary hearing child. The single fact that the London County Council have separated these defective children from the rest of the deaf is of the first importance in the foundation of a scientific classification for the education of the deaf.

Hartmann[1] devotes a large section of his book to the education of deaf-mutes, and goes into the system of instruction known as the oral method with a thoroughness worthy of a practical teacher. But he seems to think the finger method hardly worth mentioning, except as an historical curiosity. He says: "The finger method is very little used, a fact which corroborates our unfavorable opinion of it. France is almost the only country in which it is taught." He seems not to know, or if he knows, he seems deliberately to ignore the fact that in Britain and America there are more deaf-mutes under tuition than in Germany and France, and that in Britain and America, both at the time he wrote and now, a quarter of a century later, the bulk of these deaf and dumb children are being taught by the finger method. Hartmann hints at the advisability of classifying deaf-mutes according to intellectual ability, but they are all to be taught orally.

Mygind[2] says that "there can no longer be any doubt that the method of instruction by which the deaf-mutes are taught to speak, and which, although it originated with a Spanish monk, Pedro de Ponce, *injuria temporum,* has received the name of the *German method,* is superior to the so-called *French method,* by which deaf-mutes are taught to communicate with their fellow-creatures by means of signs. The question is, whether the oral method is that which is most serviceable for *all* deaf-mutes, or whether there are not some deaf-mutes who have such a great difficulty in acquiring speech that too great labor is expended on learning it, to the disadvantage of other useful acquirements and knowledge necessary to them in after life. The solution of this problem must be left to pedagogues, but it may not be out of place to remark that, in the discussion which is now raging, it would seem that it is often forgotten that the use of the one or other method by deaf-mutes is not the end but the means."

The problem stated above by Mygind is the problem stated for solution in this inquiry. That the solution should be longer left in the hands of the teacher is what the present writer would strongly protest against. It is a clinical, not a pedagogical question. To the teacher of the deaf he would say: "This is no place for you alone; I must see the child first. The deaf child has

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[1] *Deaf-Mutism,* translated by Cassels (Baillière, Tindall & Cox, London), 1881.

[2] Mygind, *Deaf-Mutism,* 1894, p. 249 (Rebman, Limited, London). This book is our best work on the pathology of deaf-mutism, but its author has seen little of the deaf-mute child, except on the *post-mortem table.* He has no connection with any institution.

been lost sight of long enough amidst the dust and din of contending systems. This must cease, and the child himself must be studied. After I have examined the child we will discuss where he is most likely to do well, and you may then take him in hand."

What, then, has this clinical survey of the deaf child taught us? For it is needless to point out here that the patient study of the deaf child himself is of much greater value than a hurried run round the deaf-mute schools of the world.

Well, it has taught us, first, that deaf children, as they are represented in institutions for the deaf, are not a homogeneous class. The only reason for their all being there is that we have at present nowhere better to put them. Some of them enter the institution speaking children and leave it dumb children. To some of them speech is taught when it would be as reasonable and hardly less difficult to teach them the art of flight. To the great bulk of them, in Britain and America, a compromise is taught under the rather taking name of the "combined system." Here speech is sometimes described as "an ac-

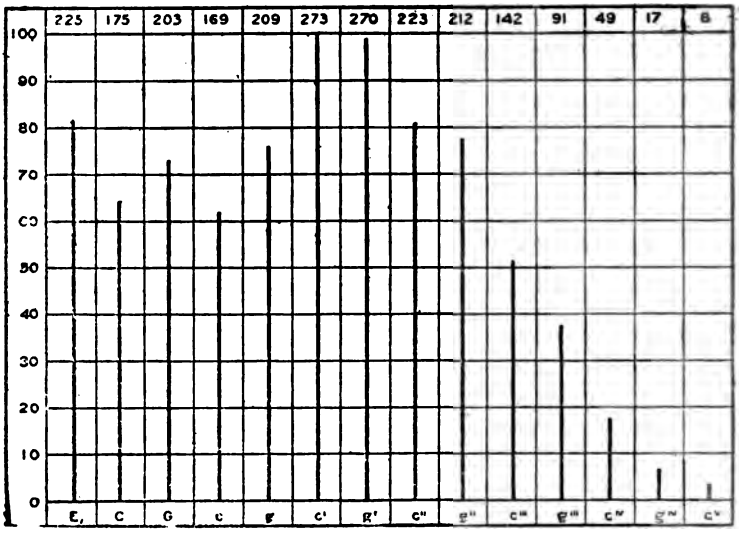

FIG. 5.—HEARING PERIOD IN SECONDS OF THE UNLOADED FORKS OF THE CONTINUOUS TONE SERIES (after Bezold).

The actual hearing is represented by the figures at the head of each column. The percentage of each fork (taking the fork c' as 100) is shown by the vertical figures. Unless there be 10 per cent. of the hearing left for the forks c'' g'' (the pitch of the speaking voice), the residual hearing will be of little use in teaching.

complishment"—an accomplishment about as useful as pianoforte playing, and which the deaf child takes care to drop as soon as he leaves school, much as the man who has learnt his German by occasional visits to Berlin and occasional courses of lessons at home avoids like poison any conversation in German with a real native. Let, however, the Englishman learn his German by residence in Berlin for a couple of years, let him *use no English during that time, let him be compelled to get all he wants and learn all he knows through the channel of the German language* for the period I have stated, and he will never again flinch before the face of the native German. So is it with the deaf child. First of all ascertain that he is likely to be a good oral pupil at

all, that he has speech or hearing, or, even without these, that he has good eyesight, a free naso-pharynx, and good intelligence; and ***unless his attention be distracted by signs, unless he divide his attention between two languages—speech and the finger-language—he will speak, and his speech will be worth having,*** if only he and his teacher keep before them the right ideal.

And what is this ideal that must be before the teacher and the deaf child? "This one thing I do." And here I am brought back to Helen Keller. When about 10 years old, and when she had been three years under tuition, Helen was seized with the determination to speak. "I must speak," she said. At first she was discouraged by her teacher, Miss Sullivan, who considered inability to lip-read an insurmountable obstacle; but ultimately Miss Sullivan became as enthusiastic as her pupil over the latter's progress, and carried out the work started by Miss Fuller—who gave Helen her first lessons—with great ability. When I asked Miss Keller lately what effect the acquisition of speech had on her, she replied: "It made me think three times more quickly." The question seemed to be new to Miss Keller and the answer unexpected by Miss Sullivan, but the statement probably means *that the acquisition by the deaf child of articulate speech makes for accurate and rapid thinking.* Here is Miss Keller's description of her earliest efforts: "I was eager to imitate every motion, and in an hour had learnt six elements of speech—M, P, A, S, T, I. Miss Fuller gave me eleven lessons in all. I shall never forget the surprise and delight I felt when I uttered my first connected sentence—'It is warm.' True, they were broken and stammering syllables, but they were human speech. My soul, conscious of new strength, came out of bondage, and was reaching through these broken syllables to all knowledge and faith."

It is from this bondage into this world of knowledge and faith that the teacher of the deaf child is to bring him, and whilst I know that every deaf child is not an Helen Keller, *I believe that the determination and perseverance which made for success in Helen's case can, in great measure, be brought into operation by every teacher and by most deaf children, and that the result will be satisfactory speech.*

But if it be imperative on those of us who would manage the deaf to examine the children carefully, to classify them scientifically, and to restore as many of them as possible to contact and communication with the hearing world by the teaching of speech and lip-reading, it is equally imperative that we do not waste our efforts on the teaching of speech to defective deaf-mutes. To the 15 per cent. of defectives in the Glasgow school, and to the London children collected in the Homerton school, the acquisition of speech is practically impossible. They should be separated, as they are in London, from the orally taught deaf, and taught by methods fitted to their capacities. Their presence amongst oral pupils is damaging to the latter and of no use to themselves.

But these two classes, the defective deaf on the one hand and the semi-deaf and semi-mute on the other, account for less than half of the deaf and dumb—about 40 per cent. of the whole. How are the remaining 60 per cent.—what has been called the average deaf-mute, the deaf-mute of fair or bright intelligence, with no recollection of speech, and no appreciation of spoken vowels, words, or sentences—to be taught? My answer is, in as many cases as possible, by the oral method; but in many cases the latter will fail, or be laid aside afterwards by the pupil. *The degree of success and the number of successes will depend on the amount of money spent on the work, on the time spent in school, on the ingenuity and determination of the teacher, and on the environment which encompasses the child after he leaves school.* The after-care committee of the London County Council is good, the twelve years' course *in school* of the American schools is better. In any case let us be done with this unscientific management of deaf children. If this work is worth doing at all it is worth doing well—worth doing well for the child's sake, worth doing as best the teacher can, and worth doing well for the sake of the State which must bear in one way or another the burden of the deaf child.

There are many questions which suggest themselves in connection with this inquiry which cannot be taken up here, but about which information has been

forced upon the writer. He only mentions some of them here in the hope that the reader may be encouraged to think of them, viz., the extent to which speech and lip-reading are used by the adult deaf, the relative values of day schools and residential institutions, when the school course for the deaf should begin, the size and outfit of the institutions for deaf children, the prevention of congenital and acquired deafness, &c.

The following practical suggestions are put forward in connection with the subject of the inquiry, "The Study of the Deaf Child":

1. All children on admission, or shortly thereafter, to a deaf school, should have their ears examined and their hearing tested by an aural surgeon. Voice tests are the most important, but fork tests, limited to the speech area of the scale, should also be used. The fork tests used in this inquiry are of great scientific interest, but are much too elaborate for routine work.

2. The eyes of all children should be similarly examined by an eye surgeon, and, where refraction errors are discovered, these should be corrected by the fitting of suitable spectacles.[1]

3. The naso-pharynx of deaf children should be examined, and, in oral pupils at least, enlarged tonsils and post-nasal adenoid growths should be removed where those are well marked.

4. As a result of the above examinations, and of the teachers' experience for a year or so, deaf children should be classified into those who should be taught orally and those who should not, and these two classes should be taught in separate schools quite unconnected with one another.

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[1] At the suggestion of the writer, the directors of the Glasgow Institution have appointed an eye surgeon for this work.

PROCEEDINGS OF THE DEPARTMENT OF SPECIAL EDUCATION, NATIONAL EDUCATIONAL ASSOCIATION—SECRETARY'S MINUTES.

FRANK M. DRIGGS, OGDEN, UTAH.

First Session—Wednesday Morning, July 10, 1907.

The first meeting of the department was called to order at 9:45 A. M., in the State Normal School, Los Angeles, Cal.

The opening address was that of the President, M. N. McIver, Superintendent of Schools, Oshkosh, Wis.

Geo. L. Leslie, Director of Science Department, city schools, Los Angeles, then addressed the department upon the subject, "The Need of a Better Understanding of the Exceptional Child." This theme was discussed by James A. Foshay, ex-Superintendent of Schools, Los Angeles, Cal.; John T. Prince, agent of the State Board of Education, Boston, Mass.; W. M. Ruthrauff, Superintendent of Schools, Tucson, Ariz., and Mrs. I. W. Huey, Upland, Cal.

Following this, F. M. Jack, State Institute Conductor, River Falls, Wis., read a paper on "Why Wisconsin Believes in Public Day Schools for the Deaf."

A report of the commission appointed in 1905 to examine into the relations existing between the educational work of the State institutions and the State departments of public instruction of the different States was read by the Secretary. Upon motion, this report was ordered printed and the commission granted another year for further investigation.

A resolution was passed instructing the President to appoint a committee to recommend a plan for the investigation of the problem of the exceptional child and report at the next meeting of the N. E. A.

The chairman then announced the following committees:

On Nominations: J. P. Greeley, Whittier, Cal.; Frank M. Driggs, Ogden, Utah; and Miss S. Sorenson, Milwaukee, Wis.

On Resolutions: W. A. Gates, Berkeley, Cal.; James A. Foshay, Los Angeles, Cal.; and F. M. Jack, River Falls, Wis.

An adjournment was taken until 9:30 Friday morning.

Second Session—Friday Morning, July 12, 1907.

The meeting was called to order by the President at 9:45 A. M.

Frank M. Driggs, Superintendent of the Utah School for the Deaf and the Blind, Ogden, Utah, read a paper on "Self-Support."

A discussion followed by Miss Jennie C. Smith, principal of day schools for the deaf, Oshkosh, Wis., and Miss Frances McKinley, teacher in the Kansas School for the Deaf, Olathe, Kan.

W. A. Gates, Secretary of the Board of Charities and Corrections, Berkeley, Cal., then made an address upon the topic, "The Training of the Incorrigible."

The Round Table Conference was led by M. N. McIver, the President, the subject being "The Industrial Training of the Deaf."

The Chair announced as members of the committee to recommend a plan for the investigation of the problem of the exceptional child: M. P. E. Groszmann, Plainfield, N. J., Chairman; Geo. L. Leslie, Los Angeles, Cal.; F. M. Jack, River Falls, Wis.; J. W. Jones, Columbus, Ohio; O. H. Burritt, Batavia, N. Y.

The Committee on Nominations reported as follows: For President, E. R. Johnstone, Vineland, N. J.; for Vice-President, O. H. Burritt, Batavia, N. Y.; for Secretary, Miss Jennie Smith, Eau Claire, Wis. The report was accepted and the Secretary instructed to cast the ballot of election.

Upon motion, the session adjourned.

FRANK M. DRIGGS, Secretary.

[Mr. Driggs writes, in a note accompanying his report, as follows: "The sessions were very well attended and a great deal of interest was shown. The key-note of the National Educational Association proceedings seemed to me to be that teachers should study children, not subjects; that they should teach children, not subjects; and that classes should be small enough to enable them to carry out this idea."—EDITOR.]

WILLIAM VAN PRAAGH.

BY S. KUTNER, LONDON.

On Friday, June 28th, Mr. William Van Praagh, the renowned champion of Oralism and one of the greatest benefactors of the deaf, was, in full harness, suddenly and prematurely cut down by death. Thus ended a career the value and nobility of which it would be hard at the present to estimate, so great has been the shock to the profession in general, and particularly to those who were privileged to come into close contact with him.

It was prize day at Fitzroy Square, and the room in which his

WILLIAM VAN PRAAGH

voice was so often heard was crowded to the utmost with a distinguished audience presided over by Earl Crewe, the President of the Association for the Oral Instruction of the Deaf and Dumb. Mr. Van Praagh, in his masterly manner, had assisted in the usual demonstration with the pupils, had referred in feeling words and with deep emotion to the late foundress of the Association, and had barely left the room after a brief reply to the customary vote of thanks to him, when he was stricken down, and in spite of the loving ministrations of a few friends, breathed his last in the office in which he had labored since the Association was founded, in 1870. The sad news was reverently conveyed to the few visitors still remaining in the Institution, and the effect upon them bore eloquent testimony to the esteem and affection in which the dead master was held.

The funeral, which took place at the Willesden Jewish Cemetery on the Tuesday following, was largely attended by representatives of the community and of the numerous societies with which he was connected, as well as by leading teachers and others interested in the deaf from different parts of the country.

Born in Rotterdam on June 11th, 1845, Mr. Van Praagh began his life's work under Dr. Hirsch at the Institution for the Deaf and Dumb in that city. Receiving his first call, he came to London in 1866, and was appointed Director of the Jews' Deaf and Dumb Home, then in its infancy, at Burton Crescent W., London, where he soon proved himself an admirable exponent of the method of Oral teaching for the Deaf and Dumb, then little practiced in the United Kingdom. So striking were the results achieved that the foundress of the above Home, the Baroness Mayer de Rothschild, desiring to extend the benefit of speech and lip-reading to members of all creeds, established the Association for the Oral Instruction of the Deaf and Dumb at Fitzroy Square, with the following objects:

"(1) To naturalize and nationalize in this kingdom the oral instruction of the deaf and dumb by lip-reading and articulate speech, to the rigid exclusion of the finger alphabet and all artificial signs.

"(2) To train qualified teachers on this system, both male and female.

"(3) To maintain a Normal School for instructing deaf and dumb children."

Appointed to this wider and more responsible work, Mr. Van Praagh was not slow to prove his worth as a teacher and as a

trainer of teachers, his success being immediate and attracting considerable attention throughout the country. By his unfailing kindness toward the pupils he gained their love and the esteem of their parents, while his students, now practicing in different parts of the world, unite in showing him a respect amounting to veneration. Possessed, also, of an enthusiasm and a sincerity of aim which was peculiarly stimulating, his influence upon the profession was far-reaching, and even those who disagreed with his opinions could not withhold their respect for the man and his method. Wherever teachers were met together, professionally or socially, Mr. Van Praagh's striking personality was rarely absent. He was a staunch supporter of the Pure Oral Method and a fearless opponent of signing and finger-spelling; but once a debate was ended, he never failed to display the politeness and the generosity which were characteristic of him in his professional no less than in his private life.

Ever in the front rank of every movement calculated to benefit the deaf and their teachers, Mr. Van Praagh was one of that energetic band whose agitation led to the appointment of the Royal Commission before whom he gave such valued evidence. Soon after the passing of the Elementary Education (Blind and Deaf Children) Act, he founded the National Union of Teachers upon the Pure Oral Method, a society which met regularly at Fitzroy Square, and of which he was the moving spirit, acting from its inception as Honorary Secretary. He was connected with the Council of Headmasters and the National Association of Teachers of the Deaf, and acted as Chairman of the Metropolitan and Southern Branch of the latter body in 1905. He also took an active part in the formation of the Joint Examining Board of the Colleges for Teachers of the Deaf, and during the preliminary meetings he displayed much tact at more than one delicate crisis.

An ideal propagandist, Mr. Van Praagh was ever ready to uphold and disseminate his views, based, as they were, upon an experience which compelled the respect of partisans and opponents. Upon the platform and in the press, in the class-room and the lecture hall, he lost no opportunity, he spared no effort in the direction of the noble aim of his noble life; and the tribute paid to his memory in breathless silence by his numerous confrères at the Edinburgh International Conference showed, in an emphatic manner, the sense of the loss sustained by the profession and the deep sympathy with those who mourn a true husband and father.

PROCEEDINGS OF THE SIXTH INTERNATIONAL CONFERENCE OF TEACHERS OF THE DEAF,[1] HELD AT EDINBURGH, JULY 30–AUGUST 2, 1907.

FRANK W. BOOTH, WASHINGTON, D. C.

Upon invitation of the "National Association of Teachers of the Deaf" of Great Britain and Ireland, the Sixth International Conference of Teachers of the Deaf met at Edinburgh, Tuesday, July 30, to August 2, 1907, the sessions being held in the lecture hall of the Training College Buildings, on Chambers street.

Thirteen countries were represented by delegates, official and unofficial, as follows (number of delegates in parentheses): Australia (3), Canada (5), Denmark (3), France (9), Germany (2), Great Britain and Ireland (184), Holland (1), Hungary (2), Italy (2), New Zealand (2), Russia (1), South Africa (1), United States of America (9). Total number in attendance, 224.

The following is a list of the registered delegates, alphabetically arranged by countries and individuals:

Australia—Frank Tate, Sir Horace Tozer, A. Williams.

Canada—Miss M. Dempsey, J. Fearon, J. W. Hansell, T. Rodwell, Miss M. Ross.

Denmark—G. Forchhammer, A. Hansen, Mdlle. Jah. Weile.

France—A. Bélanger, P. C. Carpentier, J. B. Chauvreau, M. Dupont, H. Gaillard, Mdme. Houdin, L'Abbé Rohart, A. Vendrevert, Pauline Wagmeester.

Germany—Emil Wollermann, Otto Wollermann.

Great Britain and Ireland—B. St. John Ackers, Mrs. Ackers, W. H. Addison, Mrs. Addison, M. Ayliffs, Mrs. Ayliffs, Miss D. C. Baker, B. C. Baldie, J. S. Barker, F. G. Barnes, J. P. Barrett, J. D. Barton, H. L. Bassett, Isabel Baxter, Miss W. E. Baxter, John Beattie, Miss N. M. Beckingsale, Miss E. M. Bessant, Jessie Bottrill, Elizabeth Bourne, Miss Allan Brown, John Brown, Thos. Burke, Rev. T. E. Butter, Miss H. Cannt, Emily Carter, E. B. Chard, W. B. Chard, J. Clarke, H. Clegg, Gilson Coward, Miss A. M. Croghan, Rev. J. Cussen, Miss E. Cuthbertson, E. I. Dalton, Alexander Darroch, Walter Day, Miss F. J. Deakin, B. De la Court, P. A. Dodds, Miss K. M. Donaldson, M. Durward, Harold Earlam, A. E. Eichholz, Richard Elliott, Miss E. M. Elliott, Miss M. Elliott, A. Farrar, Miss A. Ferrier, W. J. Fielden, J. W. Fisher, Mrs.

[1] Previous International Conferences or Congresses were held—the First, at Paris (1878); the Second, at Milan (1880); the Third, at Brussels (1883); the Fourth, at Chicago (1893); the Fifth, at Paris (1900).

Fisher, J. P. Fleming, Mr. Follwell, W. N. Garnaviller, Miss J. Gillies, Irene Goldsack, Miss K. G. Graham, Miss M. Graisick, Lucy Gray, E. V. Greatbach, Chas. Green, Mrs. Green, G. H. Greenslade, Miss C. E. Hare, W. M. Harper, Eccles W. Harris, Sibley G. Haycock, Mrs. Haycock, C. B. Henderson, D. L. Henderson, E. Hewetson, Edith H. Hewett, Maurice Hewson, Francis Hobson, Miss M. Hooper, Miss A. B. Hopson, Miss T. Houch, D. C. Howard, Susanna E. Hull, Miss N. W. Hunter, Miss J. Hyslop, Margaret Hyslop, Arthur Illingworth, E. A. Illingworth, Mrs. Illingworth, L. Illingworth, J. Jackson, Miss Jennings, Mary Johnstone, B. P. Jones, F. Ince Jones, H. Keen, Edward Kirk, S. Kutner, W. Landels, Julia Leeds, Mrs. C. E. Lees, Isabella Longwill, James Kerr Love, Miss S. M. Lucy, Mrs. David Lyon, Fred Madden, Mrs. Madden, T. Maginn, Kate Marr, Albert Martin, Miss K. A. Mason, Mary McBean, Walter McCandlish, Mrs. McCandlish, Miss L. McCrackett, Miss McKenzie, John Mills, Mrs. Mills, Joanna Morrison, Miss E. G. Muir, S. Murray, Blanche Neville, Miss E. Nolan, Walter Nolan, Mrs. Nolan, Miss Withington Nunn, Kate Patterson, Miss Kinlock Paul, Annie Peebles, Scott Moncrieff Penny, S. Pettman, Miss N. K. Pirrie, H. Richardson, M. B. Rintoul, Miss E. M. Roberts, Miss L. Robertson, Miss E. L. Robinson, K. D. Robinson, Fred H. Roe, Mrs. Fred H. Roe, Grace Roe, W. R. Roe, Mrs. W. R. Roe, Miss Rossiter, Gertie Scott, A. E. Scougal, Miss L. Sewell, J. G. Shaw, Mr. Sievewright, Amy Simmons, Robert Skinner, Arthur Sleight, A. G. Smith, Eleanor Smith, Ethel Smith, W. B. Smith, Miss M. M. Steven, A. J. Story, Mrs. Story, Alex. Taylor, Miss D. K. Taylor, Christina Thompson, E. W. Thomson, I. Torrance, W. Turnbull, Mrs. Turnbull, Miss M. A. Turner, Edith Underwood, B. G. Walton, Rev. J. Ward, M. B. Warnyouth, Lilian Waugh, Miss M. E. Waul, Mr. Welsh, Mrs. Welsh, J. M. Welsh, Mrs. J. M. Welsh, J. O. White, B. M. Williams, Winifred Williams, A. Wilson, Rev. E. Wilson, E. W. Winter, Isabella Wood, Russell Wood, Andrew Wright, W. Young.

Holland—P. Roorda.

Hungary—Deschensky Ferenc, Scholtz Lajos.

Italy—G. Ferreri, Signora G. Ferreri.

New Zealand—G. Hogben, W. P. Reeves.

Russia—Mdlle. G. Kulpe.

South Africa—W. H. Nicholas.

United States of America—F. W. Booth, A. L. E. Crouter, E. M. Gallaudet, Miss Gallaudet, Mary S. Garrett, T. C. Forrester, P. J. Rotherham, E. S. Thompson, W. Wilkinson.

The first session, on Tuesday morning, June 30, was opened by Rt. Hon. James P. Gibson, J. P., Lord Provost of Edinburgh, in a brief address. He extended to the delegates, and in particular the foreign representatives to the Conference, a very cordial welcome to Edinburgh. The fact that so many Continental countries were represented there was an indication of the importance attaching to their

deliberations. Speaking of the purpose of the Conference, his Lordship said there were some who believed the State ought to provide more liberally than they did for all institutions for the education of the deaf and dumb. He did not object to that, but he objected to too much State officialism. If institutions of this kind could be conducted by private enterprise, provided they had sufficient means, probably that was the most sympathetic way they could reach the afflicted; but there was a duty on the Government to see that these afflicted ones were not neglected.

Responses were made in behalf of the foreign delegates by Mr. P. Roorda of Holland, Signor G. Ferreri of Italy, Mr. G. Hogben of New Zealand, Mr. W. H. Nicholas of Natal, Dr. E. M. Gallaudet of the United States, Dr. G. Forchhammer of Denmark, and Mr. A. Bélanger of France.

Mr. S. Kutner here made touching reference to the recent death of Mr. William Van Praagh, and offered a resolution of regret, which, after being seconded by Mr. Addison, Mr. Roorda, Mr. Bélanger, and Dr. Elliott, with remarks from each, was adopted by a standing vote.

With a single exception the papers read during the Conference dealt with the general question of the present state of deaf-mute education in the countries represented by the writers. Thus the first paper, read by Dr. Richard Elliott, Chairman of the British Association of Teachers and a Vice-President of the Conference, was on the subject, "The Present State of Deaf-mute Education in England." The education of the deaf in England, he said, was certainly now a national work, for there was not one public school for the deaf in the country which was outside the scope of the Government provision and consequent control. The science and art of deaf-mute education might not yet be fully matured, but the evolution was going on, and would produce its result, and find for it a fitting place in the scheme of humanitarian effort. In contrast with the former inadequate periods of school instruction, they had now a possible period of eleven years given, namely, five till sixteen years. He had not the school statistics of 1906, if such existed, but in 1904 there were in England approximately 2,200 children in the Board schools and 1,100 in the day schools. Of these about 2,600 appeared to be taught orally. The attempt was now made pretty generally to teach speech to the deaf, and to give all, or the main part, of the instruction orally. It would be a manifest advantage for the semi-deaf to be instructed separately. Of the Institutions in England, three follow the Combined system, ten the Oral, and six the Oral and Manual—a dual system.

Dr. E. M. Gallaudet, President of the Convention of American Instructors of the Deaf and President of Gallaudet College, followed with an account of the schools for the deaf in the United States. He presented statistics showing that there were in the United States 58 public boarding schools, 57 public day schools, and 17 denominational and private schools, with a total attendance of 12,344 pupils;

and that these pupils were distributed, 150 in Manual schools, 2,309 in Oral schools, and 9,885 in schools conducted on the Combined system. Of the 9,885 pupils in the Combined system schools, 5,537 were taught speech, making with those in the Oral schools, something over 63 per cent. of the whole number of pupils in our schools now being taught to speak.[1] In only a few of our States are there laws compelling parents to send their deaf children to school. In States where such a law exists its execution has brought a considerable number of children into the schools who were being kept at home that their labor might be made a source of profit to their parents. It is probable that in sections of our country and in large cities where no compulsory law is in force, more than a few deaf children fail to receive the education which is freely offered them at public expense. In general, however, the parents of deaf children are glad to send them to school.

Few schools receive children at a younger age than seven years. The term of years allowed in school varies in different localities. Nowhere is less than seven years offered, and in some schools the course may cover twelve, and even more years. In the Institution sustained by the Federal Government at Washington, of which the College is a part, the only limitation is that those received shall be of teachable age. This very liberal provision suggested to the Governing Board of the Institution, the extension of the course of study, so as to include the curriculum of a college, giving to pupils capable of mastering the higher branches seventeen years of school and college life. Into the advanced courses of study provided at Washington, Congress has opened the door to the deaf in all sections of our country by the establishment of one hundred free scholarships; and this number has, thus far, been found sufficient for all those who were capable of entering upon a collegiate course of study and desirous to secure its advantages. As between day schools and institutions, the weight of opinion among teachers and principals is decidedly in favor of those schools in which the pupils are full residents. This view seems to be sustained by many parents of children who are at first placed in day schools, for there is a steady drift of such children to the boarding schools. And in very many cases it is found that the attainments of these compare unfavorably with those of children who have been an equal length of time in boarding schools. The great majority of our schools are sustained by appropriations of public funds by our State or City Governments. Very few have endowments, and those that are so favored receive State aid to a greater or less extent. In a very large majority of our public boarding schools, fifty-one out of fifty-eight schools, four

[1] Dr. Gallaudet has taken for his divisor, in arriving at this percentage, the number of pupils in American schools "within the last fiscal year," namely, 12,344, instead of the number "present November 10, 1906," 11,344. (See January, 1907, Annals.) Using the latter number for the divisor, the percentage of pupils being taught speech in American schools is 67.4.—EDITOR REVIEW.

methods (the Manual, the Manual Alphabet, the Oral, and the Auricular) are employed in what we term a combined system, quite a wide variety of adjustment existing in the schools working on this system. Only two schools limit themselves to the manual method, and a similar number call themselves manual alphabet schools. In one of these, however, speech is taught to all the pupils. No schools practice the auricular method exclusively, and out of the whole number of pupils in our schools only 152 are taught by this method.

In the schools holding to the combined system it is understood that all pupils are given an opportunity to learn to speak, and with those who attain a fair measure of success, instruction in speech is continued through the whole course. In many Combined system schools classes are maintained in which oral methods are carefully followed. No uniform standard as to success or failure in speech is recognized. The decision as to this rests with the authorities of the several schools, and opinions vary as to what constitutes success in speech. If I may be allowed to express an opinion in this matter, I will say, that in a rather wide intercourse with orally taught deaf persons, I have been led to believe that such speech as can only be called a half success, is often a greater handicap to one who uses it in intercourse with hearing people than no speech would be. I know many of whom their acquaintances say that they dread to meet them because of the great difficulty of understanding their speech. Such deaf persons are shunned in society, as they would not be if they offered to communicate with their friends by writing or with the finger alphabet. In my opinion, zealous and well-meaning teachers of speech encourage many of their pupils to continue to speak when the kinder advice to such would be to drop speech altogether. In some of our large schools classes are formed of such pupils as would be called dull, but no general classification is attempted, such as is made in the schools of Denmark. Industrial training is given in nearly all the boarding schools, and to a limited extent in a number of the day schools. Sixty-five different industries are reported in the Annals as being taught in our schools, the most important of which are bookbinding, carpentry and cabinetmaking, domestic science, dressmaking, electricity, farming and gardening, half-tone engraving, painting and paperhanging, printing, photography, shoemaking, tailoring, wood engraving, and working in iron. Those who have been taught trades in our schools often follow them in after life, but perhaps quite as often take up other occupations. Our deaf-mutes are, with rare exceptions, self-supporting. The graduates of the College at Washington have shown the value of their advanced training by filling positions as architects and builders, editors and publishers, chemists and assayers, surveyors and civil engineers, postmasters, bankers, recorders of deeds, one patent lawyer, a State botanist, fruit farmers, general farmers on a large scale, clerks in departments of the United States Government and in the Smithsonian Institution, in custom-houses, postoffices, railroad offices and insurance companies; assistants in public libraries, artists, en-

gravers, lithographers, and photographers; a large number are efficient teachers in the State Schools for the Deaf, several being principals, and more than a few have been founders of such schools. And last, but not least, a number are regularly ordained clergymen conducting missions and churches for the deaf in many of our cities and large towns. No comprehensive plan is to be found in our country for the supply of teachers for our schools. A small normal class has been for several years maintained in connection with the college and school at Washington. Fifty who have been trained in this class are now teaching in our schools, and eight of them have become principals of schools. A normal class is an adjunct of the Clarke School at Northampton. In a few other schools arrangements exist for the training of teachers, but there is no uniform system of graduation or certification upon examination such as exists in your country. The pay of our teachers is not as much as it ought to be, but I believe the salaries compare favorably with those of teachers of normal children. Unthinking people sometimes ask if it is right to burden the State with the considerable expense of educating the deaf in schools in which they are not only taught, but are fed, and in some instances clothed. There is no doubt as to what the answer to this question should be. From an economic point of view it is an absolute saving to the community to raise the deaf from a condition in which they are unproductive, dependent, and often dangerous members of society, and make them self-supporting, wealth-producing citizens. (Applause.) From a humanitarian point of view, still stronger reasons may be found, for education means more to the deaf than to any other class of persons. Without it they are in a condition more deplorable than that of the imbecile. For those without mind have no aspirations, and do not realize what their lot is. But the deaf with full mental powers are painfully conscious of their limitations, often suffering heartrending mortification over their deprivations and disadvantages. And when it is known that they can be measurably relieved of these by education, and can be made happy and useful men and women, the question of expense is more than answered. The schools for the deaf in our country represent in their grounds, buildings, and equipment, an investment of over $15,000,000, and the annual cost of maintaining these schools is about $3,200,000. But no outlay on the part of our city, State, and National Governments is more cheerfully met.

Mr. B. St. John Ackers, a Vice-President of the Conference and a Member of the Royal Commission on the Education of the Blind and Deaf, then moved the resolution,

> "That this Conference is of opinion that the annual government grant of five guineas per child should be increased to at least £15 in the case of children in Deaf schools."

Was it right, Mr. Ackers asked, that the education of the deaf and the payment of their teachers should be dependent upon charity?

DELEGATES AT THE SIXTH INTERNATIONAL CONFERENCE OF TEACHERS OF THE DEAF

Now that the whole of the cost of both was paid, in the case of children having their full senses, out of public funds, surely not. (Hear. Hear.) The education of deaf children was much more expensive than that of ordinary children, yet, in proportion to the cost, the Government grant was less.

Sheriff Scott Moncrieff Penny, a director of the Glasgow Institution, seconded the motion. He said the principle had been conceded. The Government had not left it all to charity. It had given and was giving a grant, which, in the opinion of all who were able to judge, was quite inadequate. If twenty years ago the Government tentatively gave five guineas, and if, as everyone knew, expenses had increased, he thought they would agree that they were entitled now to have a considerable increase in the grant, and that £15 was not too much.

A rider was added at the suggestion of Mr. E. V. Greatbach, Chairman of the North Staffordshire Joint Authority for Educating Blind and Deaf Children,

> "That representative deputations be appointed by this Conference to wait upon the Board of Education and the Scotch Education Department regarding the matter."

The motion and rider were carried.

In the afternoon Mr. A. E. Scougal, H. M. Chief Inspector of Schools in Scotland, opened an interesting exhibition of pupils' work, held in connection with the Conference in the art rooms of the Heriot-Watt College. Mr. Scougal said there were important points in connection with the education of the deaf-mute that seemed to him to touch very closely on the question of education generally. He attached great importance to the training of teachers; he was convinced that a great part of the solution of their whole educational problem lay in the proper training of teachers, and in Scotland at the present time this question was very much to the fore. They were embarking upon a new system, and perhaps on that account this was the psychological moment to impress upon those in authority the question he knew they had so much at heart, that of the special training of special teachers of the deaf-mute. He was convinced that with the deaf-mute as with the ordinary child the crux of the whole situation lay in the proper handling of language. He saw no evidence whatever that the deaf-mute was intellectually outside the pale of the educational development of the ordinary child.

Dr. Charles Douglas presided over the later proceedings, and Mr. E. V. Greatbach moved the first resolution, which was to the effect,

> (*a*) "That there should be one recognized standard of qualification for all future teachers of the Deaf."
>
> (*b*) "That whilst this Conference endorses to the full the opinion that teachers of the Deaf should be required to attain to the same standard of qualification in mental attain-

ments and in the art of teaching as are required of certificated teachers in public elementary schools, it is also of the opinion that no Government certificated teacher, or other teacher, should be permanently recognized as a qualified teacher in a school for the Deaf until he or she has made a special study of the education of the deaf, and satisfactorily submitted these special qualifications to the test of a recognized examining body."

Mr. Greatbach said this resolution was absolutely idealistic, because what it sought could not possibly be obtained at the present moment, but it was due to the children that they should strive after their ideals.

Mr. F. G. Barnes, secretary of the N. A. T. D., seconded the resolution, saying he wanted it to go forth with no uncertain voice that they insisted that for their work their teachers should be duly qualified. The resolution was carried by a large majority.

Mr. J. Beattie, of Belfast, Ireland, moved,

"That in the opinion of this Conference there is urgent necessity for the introduction of a Bill to provide for the education of the deaf of Ireland."

He said he hoped this important Conference would lend its best aid to promote legislation in the interests of the deaf and the blind in Ireland. In Ireland there was no provision either for the maintenance or education of their deaf children. They were wholly without Government aid. They had an inspector sent, and had the privilege of paying for the inspector; they had a very Liberal Government. (Laughter.) Mrs. W. H. Addison, Glasgow, seconded, and the resolution was unanimously adopted.

Mr. J. W. Fisher, London, moved,

(*a*) "That there should be a uniform system of inquiry in reference to Deaf children in all schools."

(*b*) "That the attention of the Authorities be called to the form of inquiry on the Census Return relating to the Deaf, and that they be requested to modify it with a view to increased simplicity and accuracy."

The resolution was adopted, and upon recommendation of Mr. Hogben, of New Zealand, supported by Mr. Ackers, it was agreed to form an International Committee to draw up general lines of agreement for the system of inquiry with regard to children in the schools for the deaf, and also for the form of inquiry of the census return relating to the deaf of the whole population. The Committee, having been appointed, met later, with Mr. B. St. John Ackers in the chair and Mr. J. W. Fisher acting as secretary. Preliminary steps were taken looking to the collection of all existing question forms now in use in the various countries, the British members to

act as a sub-committee to consider them and to prepare a report, to be presented to the full committee for its action through correspondence.

The "Braidwood Medal," open for competition in the British Empire, was presented to Mr. John D. Barton, of Margate, for his essay on "How to encourage a love of reading in the Deaf, with suggestions as to the literature to be placed in the pupils' hands."

The second day sessions opened with Sheriff Scott Moncrieff Penny, a director of the Glasgow Institution, occupying the chair. The first paper read was by Mr. G. Ferreri, on the subject of the state of Deaf-mute education in Italy. He said that in Italy the education of the deaf is still considered a charitable work, and has therefore all the characteristics of a charitable enterprise. The last census shows that there are in Italy 31,267 deaf-mutes, of whom 7,040 are of the age from 7 to 15 years. At present only two-fifths of the children of school age are in school. Instruction is practically limited to those regions where the wealth of the population from prosperous industries permitted some "crumbs from the rich man's table" to fall to their advantage; but they were entirely neglected in those parts of the country where riches was a myth, and where assistance from the Government did not exist, or else was exhausted by a few fortunate ones. Since 1876 the method of instruction to the deaf in Italy is theoretically that of articulate speech and lip-reading. Practically, however, one cannot affirm the absolute dominion of the famous Italian pure oral method. Two circumstances are opposed to this. The first is a natural one, and consists in the talent of the Italians for gesticulation; the other is artificial, and depends upon the character of our institutions, which insisted on remaining asylums even after the Congress of Milan (1880), and in giving shelter to the adult deaf they have preserved the tradition of conventional mimic. While they have succeeded in excluding the manual alphabet (a minor evil) from the school, they have kept in the schools and outside the mimic, which is of the most serious damage to instruction in language in general, and to oral instruction in particular. One would say that the didactic anarchy in our schools puts into practice the absurd aphorism of Assarotti that "the best method is not to have any." If to this we add the prejudice that the pure oral method should be applied to all the deaf and dumb, it is easy to understand how and why we are not preoccupied as to special arrangements for the dull and backward deaf children.

The next paper was by Prof. Adolphe Bélanger, in which he gave a view of the state of the education of the deaf in France. The French schools contain 3,894 pupils, and from one cause or another the children are rarely sent to school until the age of eleven or twelve. The state requires that teachers shall have had preliminary training, and candidates for training must have either a certificate of primary instruction or a university diploma. The title of pro-

fessor is given only after several years of actual teaching. Pensions equal to half the average salary of the last three years are granted after thirty years' service, the retiring age being sixty. All the schools in France are Oral, and it is said that only five to ten per cent. of their pupils fail in industrial life. Language is taught by the method of the late Mr. Volade-Gabel, and rests upon intuition, the sight of the action itself, and the teaching of complete phrases. Grammar is taught only in the latter end of the school life. Industrial training is made an important part of the instruction in most schools during the last years in school.

This paper was followed by one by Mr. Anders Hansen, on the subject of the Danish State Schools for the Deaf. In Denmark, by a royal resolution of 1817, education was made compulsory for all deaf children in the country; thus Denmark was the first country in the world to acknowledge the right of the deaf child to receive an adequate education, and to insure it through law. The Danish system of classification of deaf children has until lately been little known in English-speaking countries. Owing to the smallness of the country, and to the circumstance that the State is the organizer of the instruction, it is comparatively easy to provide a fairly good education. All little deaf children, when eight years old, enter, each year the 1st of September, the preparatory school which is connected with the royal institution at Fredericia, where they live the first year of their school life, and where they are taught the elements and are tried and classified. All semi-deaf and semi-mute children form one group, and the congenital deaf section is, during that year, divided into three groups, *a*, *b*, and *c*, in accordance to their mental capacities for instruction, *a* being the brightest part, etc. At the beginning of the second year all these groups are separated and sent to the four State schools, where they stay seven years. The total number of pupils on roll is at present 351; out of that lot about a sixth is placed in the preparatory school. The rest, 295, is divided as follows: semi-deaf and semi-mute in the school in Nyborg, about 26 per cent.; *a* pupils in the school at Fredericia, 23 per cent.; *b* pupils at the institution at Fredericia, 25 per cent.; *c* pupils in the institution at Copenhagen, 22 per cent. Four per cent. are feeble-minded deaf, whereof 3 per cent. are at Copenhagen and 1 per cent. at Nyborg in special classes. All pupils, except in the institution at Copenhagen, are educated orally, or 75 per cent. are taught speech, and by speech, and 25 per cent. are taught by the silent method. Roughly calculated, I should think that between a third and a fourth of the semi-deaf-mute group at Nyborg handicaps the instruction considerably; that part is mostly found among the semi-deaf pupils. If a subdivision of the semi-deaf and semi-mute group at Nyborg cannot be practiced in the future, in accordance to the aptitudes of the pupils, the Danish system is lacking and not entirely satisfactory. But when that school starts work again after the summer vacation, we are going to try to make an arrangement to that end. It is my firm conviction that language teaching by us is carried out under a

freer form than is in use in most other schools abroad. Our proceedings are of a more imitative character than constructive. Formal drill work, say for the correct use of the verb, its tenses, its conjugations, is almost unknown by us. Formal grammar is therefore rather to be considered as discarded from the language teaching, in contrast to what is to be seen in many other countries, and in my judgment the final results have not suffered. In the school at Nyborg, and also partly in the *b* department at Fredericia, the written language is very much used on the blackboard in the elementary classes; and at Nyborg that means of communication is greatly supplemented with that of Dr. Forchhammer's devised mouth-hand alphabet. These proceedings do not exclude oral exercises; on the contrary, the two said expedients further only oral training, as they make it possible to deal with a much larger amount of language than we ever had done before these reforms were introduced some years ago.

The following resolutions, moved by Mr. S. Kutner, of London, and seconded by Dr. James Kerr Love, of Glasgow, were adopted (resolution *b* having been modified in accordance with a suggestion of Dr. W. R. Roe, of Derby):

> (*a*) "That the presence of defective Deaf-mutes in our schools militating against their best interests and the best interests of the normal pupils, special residential schools should be provided into which could be drafted defective deaf children from all parts of the kingdom."
>
> (*b*) "That in order to make suitable provision for partially Deaf children, special classes should be provided, under the management of teachers qualified to teach speech to the Deaf."
>
> (*c*) "That powers should be granted by legislation for committing all feeble-minded deaf, who are eventually found to be incapable of self-support, or who are not under proper control, to permanent care in an industrial home or colony."

The resolutions were discussed at length by Dr. Love, Mr. W. H. Addison, and others. Dr. Love is the medical adviser and Mr. Addison is the headmaster of the Glasgow Institution for the Deaf. Dr. Love said these resolutions seemed to him to lead to what would be the ultimate solution of the difficulties of deaf-mute education. The center of difficulty was the question of the semi-deaf. These existed in the proportion of about 25 per cent. of the deaf in all countries. But in touching the question of the semi-deaf they were touching a very much larger question. Deafness existed in all degrees. Deaf children existed outside of their institutions—outside of any arrangement for their education. An inquiry in London into the conditions present in three or four large schools, in the aggregate having an attendance of 3,330 pupils, had revealed the curious fact that 1.5 per cent. of the children attending the elementary schools in London were backward because of hardness of hearing. In Lon-

don he supposed there were probably 500,000 children of school age; in Glasgow, with a million of population, they had nearly 100,000, so that there were 1,000 children attending elementary schools in Glasgow whose hearing was defective. That was ten times the number of deaf and dumb children belonging to the Glasgow area. Nothing was being done for those hard-hearing children. This classification they aspired to was sometimes pointed to as a thing they might get some day—a thing there was no use talking about as likely to come about in the immediate future. As they had seen, it existed in Denmark. But it existed nearer home. In London they had the largest and most interesting experiment in the world going on, and by it they would have a demonstration of what could be done with all classes of the deaf. This led, of course, to scientific classification, which must be based on some knowledge of the deaf child. They must, along with the elementary schools, have their deaf children thoroughly studied, so that they might be thoroughly classified.

Mr. Addison followed with objections to clause (*b*)—as it was first offered. He said he thought it would be a great mistake to commit the meeting to an expression of opinion that the class of the semi-deaf should be taught in connection with the ordinary hearing schools. In common with Dr. Love, he had been studying this subject for a considerable number of years. In former days they had not much to do with the semi-deaf, but since the passing of the Acts which had swept into their schools the scum of the big cities he found they were now getting a large number of children who were not totally deaf. His experience was that a large number of these semi-deaf children were physically weak, and others of them mentally weak, and if they passed this resolution as it stood the local authorities would ask themselves not what was the best method of providing for those children but what was the cheapest method, and would place the semi-deaf children in a school of 1,000 to 1,500 children. He did not think that would be the best provision to make for such children. They required a great deal more care and teaching than they would get attending a special class in the ordinary elementary school for three, four, or five hours a day. He thought they would require feeding, medical attention, and a great many things. For these reasons he moved that the words "in connection with ordinary hearing schools" be deleted from clause (*b*) of the resolution—which was done through Dr. Roe's amendment.

The third day's session was opened by remarks by the chairman, Alexander Darroch, Professor of Education in the Edinburgh University. He said that if anything was to be done to improve the teaching of the deaf-mute in Scotland at the present time, now was the opportune moment to make a strong effort. The reason was that at the present moment—that day in fact—legally the Training College passed into the hands of the Edinburgh Provincial Committee, and the whole training of teachers was, in fact, in the hands of four provincial committees. Up to the present time they had

instituted a scheme for the training of the elementary teacher and of the secondary school teacher, but they were still considering various schemes for the purposes of special teachers. They had made arrangements for training teachers in cookery, laundry work, needlework, and other subjects, but they thought one of the important duties of those new committees should be the training of teachers of the blind and deaf-mute and of the defective child. While it would be a very unwise policy for each of the four Provincial Committees to undertake each to do this particular kind of work, it might be possible for Glasgow, for instance, to undertake the special training of the deaf-mute teacher, and Edinburgh the special teaching of the blind teacher. Whatever proposals they made, they would receive the hearty co-operation in all their efforts of the Edinburgh Committee for the Training of Teachers.

Mr. P. Roorda thereupon read his paper upon the general subject. He said that in Holland there were four schools for deaf and dumb children—the Institute for the Deaf and Dumb at Groningen (163 pupils), the Institute for the Deaf and Dumb at St. Michiels-Gestel (139 pupils), the Establishment for the Instruction of the Deaf and Dumb at Rotterdam (158 pupils), and the Institute for the Deaf and Dumb "Effatha" at Dordrecht (34 pupils). At Groningen and Dordrecht nearly all the pupils were resident, at St. Michiels-Gestel all were resident, whereas at Rotterdam all the pupils were non-resident. As in many other countries, a few children of well-to-do parents received instruction at home. The schools of Groingen and Rotterdam took children of every religious persuasion. In these Biblical history was taught in the class-room, while religious instruction, properly so called, was given by various clergymen in accordance with the wishes of the parents of each child. The Dutch schools owing their origin to private charity and enterprise are entirely independent of the State. There is no compulsory education law affecting deaf children and it is estimated that from 10 to 15 per cent. of the deaf grow up unschooled. The age of admission is 7, and the school period lasts 8 years, though it may be lengthened or shortened by the school authorities, in some instances dull children, or children entering school late, being retained until they are 19 or 20 years old. The cost of maintenance at Groningen, a boarding school, is £37, and at Rotterdam, a day school, £30, the parents or various corporations bearing the greater part of the expenses for board and lodging. At Groningen, Rotterdam, and Dordrecht the pupils are all taught after the oral system. At St. Michiels-Gestel this system was introduced a few years ago. At this school the boys of the first five years, and the girls of the first two years are now orally taugth. The other pupils are instructed after a rather complicated sign system, in which each word, even the article, has its own symbol, and the various inflectional endings, as well as the prefixes and suffixes are also indicated by signs. In a few years this system will have diappeared from the class-rooms. It will be safe to say that after six or seven years all

the deaf-mutes in Holland will be orally taught. The cases in which the oral method has failed altogether are rare. At Groningen only one of the 163 pupils has not been taught speech; at St. Michiels-Gestel two of the newcomers are incapable of instruction after the oral method, perhaps of any instruction; at Dordrecht there has been only one; at Rotterdam none. In the two large institutions, Groningen and Rotterdam, where boys and girls are taught together, the pupils of each year are divided into two classes, in accordance with their being more or less mentally gifted. The duller pupils form one division; the brighter are collected into a parallel class. This is of the greatest importance to the clever children as well as to the less clever ones. Both are benefited by receiving the instruction they specially want. In the other two schools the duller pupils are helped on by special private lessons during or after school time, and often remain for two years in the same class. Children who are mentally very weak are at Groningen put in the "Class for Abnormals;" at Rotterdam they are sent to a "Class for Very Dull Children." Imbeciles and idiots are not admitted to any of our schools. Among the papers required for admission, there is one in which the physician who has examined the child declares that it is, in his opinion, capable of instruction. If this proves a mistake, the child is given a fair trial, and when all efforts have failed, it is sent back to its parents. For the last four years evening classes have been held at Rotterdam for former pupils of the school. In the winter half-year these lessons are given twice a week for two hours to a class of about twelve. One year boys are taken, the other year girls. At Groningen and St. Michiels-Gestel some of the most common trades are taught in the institutions themselves. At Rotterdam and Dordrecht the male pupils are sent to shops in town. In all the schools the girls are taught sewing. All this teaching is not simply educational; it is not meant, in the first place, for hand and eye training; it is real trade-teaching. That trade is considered the best for a boy at which he can work profitably in the place where his parents live. A deaf-mute, after leaving school, meets with the greatest consideration, and finds the best support in his native place, where his natural protectors, his parents and friends, are ready to receive him. In by far the greater number of cases he continues to follow the trade he was taught. "Stick to your trade!" has been said to him so often that at last he knows no better, and fortunately thinks it the proper thing to do.

At Rotterdam there are no pensions for teachers, but each teacher may get his life insured for a certain amount and a part of the premium will be paid by the school. The same arrangement exists at Dordrecht. At Groningen a pension is paid, the teacher getting one-sixtieth of his salary for every year he has taught, the total never to exceed two-thirds of his last salary. In case of death, the wife gets twenty-three eightieths of his salary, and each child under twenty-one a fifth part of what she gets. Two per cent. is deducted from the teacher's salary for his own pension, three per cent. for that of his widow and children.

FOREIGN DELEGATES AT THE SIXTH INTERNATIONAL CONFERENCE

Top row—A. Hansen, T. C. Forrester, Miss Ross, Miss Dempsey, T. Rodwell, P. Roorda, W. H. Nicholas, H. Tozer, E. S. Thompson.
Middle row—G. Forchhammer, A. Bélanger, M. Dupont, G. Ferreri, L'Abbe Rohart, J. B. Chauvreau, A. L. E. Crouter, E. M. Gallaudet, J. Pearon, W. Wilkinson, F. W. Booth.
Bottom row—Mdlle. Weille, Mdlle. Wagmeester, Mdme. Houdin, Miss Garrett, Mdlle. G. Kulpe, E. Elliott.

Mr. W. H. Addison, of Glasgow, followed with a paper relating to the work in Scotland. He said: According to the best returns which I have been able to get, there are in Scotland six institutions and six day schools, which are attended by 530 scholars and taught by 52 teachers, a proportion of one teacher to every ten scholars. The age at which the majority of the pupils enter is about seven, and they leave at fifteen or sixteen years of age. In some of the schools children are received at five years of age, and here and there one finds pupils over sixteen, for the Scotch Education Department, unlike the English, is willing to pay the grant for pupils up to the age of eighteen.

Of these 530 pupils, 412 are being educated in the institutions, where they are fed and clothed as well as educated. In the day schools provided by the School Boards, education only is provided, though I am told that in some cases clothing has to be supplied by voluntary agency in order that the children may be decently clad. I am not going to enter into argument pro and con on the vexed question of which is best for the child, the institution or the day school. Personally, I hold strongly that the institution is best fitted for the majority, though I am willing to admit that in exceptional cases the home training may be and is superior to the institution. My experience in Glasgow leads me to think that under the present social conditions of our large towns, the school for the deaf must partake of the nature of a semi-hospital, and should be located in the country. The method of instruction mostly favored in Scotland is that known as combined method. According to the returns which I have received 453 children are being educated in combined schools and 77 in oral schools. These figures, however, are only approximate. The term combined carries various interpretations according to the idiosyncrasy of the person who uses it. In our Scotch schools using the combined method much good oral work is done. I have before now publicly testified that one of the best speaking and lip-reading classes I have ever seen—and you know my experience in this line is a pretty wide one—was at Donaldson's Hospital, Edinburgh. On the other hand, in more than one of the schools returned as oral, I know that the manual alphabet is used for certain pupils—so that, I think, on the whole, it may be claimed for the Scottish teachers that they are fairly tolerant on this question of choice of method—and their one desire is to do the best they can for their pupils, and, as a body, they are willing to adopt all or any method which will enable their pupils to take their part in the hearing world in which we all have to live and move and have our being. Mr. Addison discussed the question of classification, making pertinent suggestions upon it. He then continued, asking: But who shall organize such a system of classification for Scotland? It cannot be done by individual effort; that is plain; and my opinion is that, as in Denmark, it must be organized from above. The Scotch Education Department is, in my opinion, the proper body to set such a machine in motion. As a step in that direction, I would suggest

that it should imitate the example recently set by the State of New York, *i. e.,* call together a round-table conference in Edinburgh of all the heads of the institutions and schools which are at present carrying on the work of educating the deaf, appoint an inspector for the whole of Scotland to co-ordinate the work of the different schools, and also agree upon a code or syllabus of instruction which it should require all the schools to work to as far as circumstances would permit. One caution only would I give, that no attempt should be made while doing this to introduce anything like the baneful method of payment by results which cast such a pernicious influence over Scottish and English education in the seventies and eighties. Hitherto we have been considering mainly the *means of communication* between the deaf child and his teacher. We who are actively engaged in the work know, what the outside public does not, that speech, or finger-spelling, or writing is only the means to an end, the end being the intellectual development of the child and his mastery over language. Now the methods for teaching *language*—apart from the medium by which it is communicated—vary from time to time. When I was a boy the grammatical method of language teaching held the field; and I remember full well the onslaughts made on that method by the late Professor Blackie, of Edinburgh University, and others of his way of thinking. Since then the pendulum has swung to the other extreme, and, judging from the prospectuses of the various schools which subsist by teaching a modicum of French and German to aspiring globe-trotters, the grammatical method is entirely out of favor, and language can only be taught by the natural or mother's method—talk, talk, talk to the pupil from morning until noon, from noon-day until night, in the language you want him to learn, and he will, apparently without effort on his part, speak the foreign language as well as a native. So in our deaf schools the mother's method has come to be considered the correct thing, but, I am afraid, very often with poor results. The returns which I have obtained on this point seem to indicate that teachers are beginning to find that language-training, to be thoroughly effectual, must be systematized, and they are groping after some better method than is available at present. To sum up, what do we need in order to bring our Scottish schools up to the level of those of the most progressive nations, by whom we are surrounded and with whom we must compete? We want (1) Thorough national organization and classification; (2) Proper provision for the training, certification, and maintenance of special teachers; (3) We want our deaf children placed in surroundings which will give their bodies as well as their minds a chance of obtaining the fullest development of which they are capable; (4) We want to train them by the best methods, whatever they may be, and (5) We want scholarships for our brightest and best pupils to enable them to obtain the benefits of a higher education in common with their hearing fellows, an education which experience has demonstrated, at Gallaudet College and elsewhere, is quite within their capacity, if they only get the

chance. To effect these things, we need the careful organization of Denmark allied to the enthusiasm for education which is so manifest in the United States of America. Shall we appeal in vain? We think not. Scotland in the past led the United Kingdom in all matters pertaining to education. The people of Scotland only need to be convinced that a cause is worthy of support, and then I feel sure no nation on earth can or will surpass it in the thoroughness and zeal with which that cause will be taken up and carried to a successful issue.

Mr. G. S. Haycock, Glasgow, moved the following resolution, which was seconded by Mr. Richardson, Belfast, and carried unanimously:

> "That in the cases of experienced teachers of the deaf, who have proved by their work their value as teachers, and who, from their age and general circumstances, cannot be expected to sit for the Government Certificate, there should be official recognition by the Board of Education and the Scottish Education Department of such teachers."

Mr. A. J. Story, Stoke-on-Trent, moved and Mr. G. S. Haycock seconded the following resolution, which was adopted:

> "That owing to the physical and mental strain entailed in the efficient education of the deaf, this Conference is strongly of opinion that a continuous service of thirty years in the case of women, and forty years in the case of men, is as much as teachers of the deaf can be expected to perform to the fullest advantage of the pupils, and that in the interests of the children it is necessary that such provision should be made by the State, or the local education authority, as will permit of teachers of the deaf, after such a service, being able to retire on pensions commensurate with the importance of the duties they have rendered to the State."

The fourth day's session opened with Dr. Richard Elliott in the chair. A paper by Dr. A. L. E. Crouter, President of the American Association to Promote the Teaching of Speech to the Deaf and Superintendent of the Pennsylvania Institution for the Deaf and Dumb, read a paper on "The Organization and Methods pursued in the Pennsylvania Institution." It is in no sense a belittlement of other papers read to say that this was the principal paper in point of interest of the Conference, and though its reading occupied more than an hour, it was listened to with the closest attention throughout. Inasmuch as the paper as a whole is soon to be sent to our Association members in pamphlet form, only the following brief notes upon it will be here given. Speaking to his subject, Dr. Crouter said that the Pennsylvania institution had grown in the eighty-seven years of its existence to be the largest scheme of its kind in the world. There are over 570 pupils on the roll, with a staff of seventy-

two teachers, a household staff of eighty officers and employees, and a medical and surgical staff of sixteen. This involved a total annual expenditure of some $150,000 on maintenance and salaries. The method pursued was exclusively oral. The complete course of instruction continued through twelve years, though in cases of semi-mutes less time was required. He was of opinion that when a deaf child could not be educated by the application of proper oral methods it was useless to hope for any marked success under any method. And, after a careful investigation of the relative merits of oral and manual methods of teaching deaf children extending over a period of twenty-five years, and including every variety and phase of these methods, he was fully convinced that proper oral methods—by which he meant the development and use of speech and speech reading, writing, picture teaching, and the free use of books—were fully adequate to the best education of a deaf child. To him the oral or speech method was vastly superior to all other known methods of instructing deaf children, because it was an English language method, because it afforded greater advantages for the mental development of the child, because it brought him into closer communication with the great world about him, and because it restored him in greater degree to his family, to his friends, and to society than the sign-language method or any other method possibly could do. The oral method gave him all that the manual method possibly could give him, and, in addition, conferred upon him the boon of speech, even though it was imperfect speech, which more closely, and more effectively than anything else, made him an integral part of the great hearing and speaking world about him. (Applause.) There were but two great methods of teaching deaf children—the oral and the manual. All methods that were not oral in principle and in practice were manual. The attempt sometimes made to combine these two methods was, for the production of the best speech results, a demonstrated failure. The two methods were so antagonistic in their aims and purposes that they could not be combined. He appreciated the value of sign-language methods, and freely acknowledged the value of the work accomplished under them. He was not one of those who flippantly proclaimed that the sign-language was doomed, that its days were numbered. The sign-language would always remain a valuable factor for purposes of communication among the adult deaf, but its place was not in the class-room, where it was an exceedingly dangerous and useless thing. Its place, and with him its only place, was in the lecture-room or assembly hall, where were gathered together large numbers of the adult deaf for religious or secular purposes. At such times and in such places the value of the sign-language was not to be denied.

Mr. F. G. Barnes moved the resolution, which received a second by Mr. F. Ince Jones,

> "That in order to complete the system of education of the Deaf in any country, it is desirable that an advanced school or college, providing for higher branches of learning and training, should be established."

The chairman having ruled that time did not permit of proper discussion, and Mr. Ackers opposing the resolution being passed without discussion, Mr. Barnes, agreeing therewith, withdrew the resolution for the time being, and the chairman declared the resolution to be withdrawn.

At the close of the Conference Dr. Elliott, who has been for many years chairman of the National Association of Teachers of the Deaf, was presented, on behalf of Sir Henry H. Bemrose, the President of the Association, and of the members, with a silver table center-piece in recognition of the completion of fifty years' service in connection with the education of the Deaf, Dr. W. R. Roe, the successor of Dr. Elliott in his office as chairman, making the presentation address. The inscription upon the center-piece reads:

> "N. A. T. D. International Conference, Edinburgh, 1907. Presented to Dr. Richard Elliott, M. A., by Sir Henry Bemrose, Knight, on behalf of the Profession, in recognition of noble services for the education of the Deaf, 1857-1907."

After the offering of the usual vote of thanks to the officers, the Conference concluded with the singing of "God Save the King."

A number of very enjoyable social functions were held during the period of the Conference. The first, on Monday evening, July 29, was a reception to the delegates by the Directors of the Edinburgh Institution for the Deaf and Dumb, at the Institution, on Henderson Row. The second, on Tuesday evening, was a reception in the City Chambers by the Right Honorable the Lord Provost and Magistrates of the city of Edinburgh. The third, on Wednesday afternoon, was a tea, given by the Welcome Committee of the British Deaf and Dumb Association to 100 delegates and 100 of their own Association members. The fourth, on Thursday afternoon, was a trip by boat to the Forth Bridge, given by Sir Oliver Riddle, a director of the Edinburgh Institution for the Deaf and Dumb. The fifth, on Friday evening, was a dinner at the Carlton Hotel to the members, given by Sir Henry Bemrose, President of the National Association of Teachers of the Deaf.

A joint meeting of the National Association of Teachers of the Deaf with the British Deaf and Dumb Association was held on Wednesday afternoon, two papers being read, one by a representative of the Deaf and Dumb Association and one by a representative of the Association of Teachers, the subject of the papers being "How both Associations may best Co-operate in Promoting the Welfare of the Deaf." On Thursday evening a public meeting of the British Deaf and Dumb Association was held, to which the members of the International Conference were invited. An address was made by Dr. E. M. Gallaudet, which was followed by the adoption of resolutions by the meeting.

THE INSTITUTION PRESS.

SOME NOTABLE CHANGES IN THE ONTARIO SCHOOL—"TRUE ORAL INSTRUCTION" TO BE INTRODUCED.

All our readers, and especially such as have children attending the Institution, will be interested in knowing that, with the opening of the new session, some changes have been made in the kind and character of our work here which, we trust, will mark a long and distinct step in advance and bring our Institution more nearly abreast of the best and most progressive schools for the deaf in the United States and Europe.

First, as regards the curriculum. The old course of study was devised nearly thirty years ago, and has continued down to the present with practically no change. However well this may have served its purpose in former years, it was felt that it was not up to the highest modern standard. Consequently, before the close of the last session, Dr. Coughlin appointed a committee of teachers to consult with him in preparing a new curriculum. This committee met during the holidays and have arranged a new course of study for every grade. Two main objects were kept constantly in view—first, to secure an unbroken continuity of work from the lowest grade to the highest, and, secondly, to make our curriculum correspond, as nearly as possible, with that of the public schools of the Province. In the lower grades, as all educators of the deaf will understand, there must be, of necessity, considerable divergence from the kind of work done in the public schools; but in the senior grades the two curricula were made to approach more nearly to each other, until, in the highest class, they become identical. It will, of course, be impossible to adopt this new program in its entirety at once, but in the course of two or three years it is expected to be in full operation.

Since assuming the superintendency of the Institution Dr. Coughlin has gone very fully into the question of methods, and before school closed last term had resolved to introduce the oral system here to as large an extent as advisable in the best interests of the pupils. In the past there has been no oral teaching whatever done in this Institution. About thirty per cent. of the pupils have been learning articulation, which means that they spent three-quarters of an hour every day in the articulation class and the rest of the time in the manual classes. By oral teaching is meant that pupils adapted to this kind of work are put into separate classes and taught entirely by means of speech and lip-reading, varied, of course, by writing. The first oral class in this Institution was formed last January, and this session two more have been added, so that nearly forty pupils are now receiving their instruction in this way. Other such classes will be formed as soon as possible in the future, so that, in due course, a majority of the pupils will be taught by this method. In the meantime the articulation work, as previously carried on, will be continued until such time as arrangements can be completed for entirely superseding it by true oral instruction.—[The Canadian Mute.]

DOING THREE THINGS AT ONCE.

It is often said that one can not do two things at the same time. This is not strictly true, for we can all walk, dance or swim while using the brain for reading, speaking or thinking. But the bodily motions in these cases are purely reflex, although at first they were directed by the brain. The only case we remember ever to have seen of a person carrying on not two but three related actions simultaneously was at St. Saviour's Church, Oxford street, London, on the last Sunday evening we were in England.

The Church is maintained by the Royal Association in Aid of Deaf Mutes and is in charge of the Rev. F. W. G. Gilby, a hearing man. Mr. Gilby is the son of deaf-mute parents and, of course, thoroughly conversant with silent methods of communication. In addressing the deaf it is his habit always to speak as well as to spell and sign. His extemporaneous preaching is the nearest approach to doing three things at once that we have ever seen, for he not only works out his course of thought but expresses it both by speech and by spelled language, using the double hand alphabet interspersed with a few signs, all at the same time.

After the service there was a social gathering in the hall beneath the Church, and Dr. Crouter conveyed to the British Deaf the greeting sent by the members of All Souls'. Remarks were also made by Messrs. Booth and Thompson.

The work at St. Saviour's, like that at our own All Souls', is both religious and secular, a combination of church and club. Wholesome amusements are provided for the members on the week-day evenings and during the winter there are courses of lectures, somewhat in the nature of University Extension work, upon which quizzes and examinations are held. The first course this winter is to be upon English Literature, given by Mr. Wheeler of the Hugh Myddelton Day School for the Deaf.

St. Saviour's is but one of eight or ten similar centers of work among the deaf in London with a total average attendance of about one thousand.—[E. S. Thompson in Mt. Airy World (Pa.)]

OREGON TAKES A PROGRESSIVE STEP IN INTRODUCING ORAL CHAPEL SERVICES FOR ORAL PUPILS.

In the school room the change by which all oral pupils are taught only by oral teachers and do not spend a large portion of their time in manual classes, has resulted in distinct improvement in the speech work. While no sudden and radical change of methods has been attempted, there has been insistent effort toward putting in full effect the maxim, "Teach English through the use of English, spoken, spelled, or written." The most decided step in this direction was to substitute oral chapel exercises for all oral pupils instead of the former sign lectures, except on Wednesday mornings. The manual pupils have corresponding religious exercises in the school rooms, in which spelling questions and answers take the place of the formal sign lecture.—[Oregon Outlook.]

WEST VIRGINIA CONTEMPLATING A PROGRESSIVE STEP.

As usual at the beginning of school, parents besiege us to have their children placed in the oral department. We comply with these requests as far as our conditions will permit. This school has been on a combined basis for many years, and the larger number of pupils in classes instructed by the manual alphabet and sign-language. This has a very decided influence to retard work, as the pupils in their association with each other, use the sign language. This will be the case as long as the school is on its present basis. Deaf children cannot communicate with each other, except by the use of signs, or writing, and they are certain to adopt the former method, so long as there is an established sign-language with which they are familiar.

We have reasonable success in articulation and lip-reading, with semi-mutes, and occasionally with the congenital deaf, but with us, the latter class have never been numerous.

It has been our hope for many years, to establish a kindergarten department, with residence facilities, where the pupils admitted could be kept separate from those who had already entered school, and thus build up a new department, based exclusively on the oral system. This seems to be the demand of the parents, and the tendency of the age. It will have to come, and West Virginia should, and I believe will, respond to the demand.—[W. Virginia Tablet.]

OXFORD UNIVERSITY has conferred upon Doctor Bell the honorary degree of Doctor of Science. His friends everywhere will rejoice because of this highly-merited honor, and especially his friends among the deaf, to whom he is so devoted.—[Deaf Carolinian.]

THE Virginia school will have a permanent exhibit of its products at the capital in Richmond in order to advertise the school. All who have seen its exhibit at the Jamestown Exposition will agree that the latest movement is a most clever one.—[W. Virginia Tablet.]

ST. OLAF COLLEGE at Northfield, Minn., has added to its curriculum a department for the advanced education of the deaf, with Mr. L. M. Larson in charge. It opens this fall with a few students. We shall await with interest the result of this somewhat novel experiment, and it has our best wishes for its success and growth. If it proves to be practicable, it may be an excellent opening for those of the deaf who are ambitious of a higher training than this school can give them, but who are prevented by various considerations from attending Gallaudet College.—[Companion (Minn.)]

EDITORIAL COMMENT.

NOTES UPON THE INTERNATIONAL CONFERENCE.

Elsewhere is given a report, somewhat extended, of the proceedings of the International Conference of Teachers of the Deaf held at Edinburgh the past summer. Reading the report will impress with the fact that the Conference was, from every point of view, a pronounced success, and one, moreover, that will bear fruit, as it may be believed, in the material advancement of the work of the education of the deaf in the coming years, and not only in the various countries represented by delegates, but throughout the world.

In all truth, as in all modesty, it may be said, it was a splendid body of men and women who came together in the beautiful capital city of Scotland. Britain dominated the meeting, naturally, in the matter of numbers, but scarcely less, also, in the matter of the ability and force of its representatives, as shown upon every occasion of test. Elliott, "the grand old man" of the Conference, and Roe, and Illingworth, and Addison, and Barnes, a quintet of headmasters, and a half score more of their rank there were, together with a hundred or more of underteachers—these together formed a body of workers with whom the foreign representatives were pleased and proud to hold, for the season, communion and fellowship. And the foreign representatives themselves, men and women already well known one to another by repute, now found themselves face to face and working together, literally hand in hand and shoulder to shoulder, for the week, in a common cause and with the same high aims and purposes—Forchhammer, Hanson, Roorda, Bélanger, Dupont, Ferreri, Fearon, Gallaudet, Wilkinson, Crouter and a score more there were, making the meeting truly a representative one of the best thought and the most progressive forces today active in the work of deaf education throughout the world. Such meetings are surely worth while, even if for no other purpose than to bring such men into contact and to closer acquaintanceship. Nor should we fail to include the non-professional element of the Conference, as contributing dignity, prestige, and valued counsel to its proceedings, for a Conference needs—even as does the state, in its systems of deaf education—the

active coöperation and unselfish labors of its Ackers, its Greatbatchs, its Scougals, its Eichholtzs, its Pennys, its Loves, its Tozers, its Hogbens, and its Nicholas, to make it a complete and well-balanced machine for the largest accomplishment of its purposes. It is little enough to say that the presence and interest of these non-professionals, with their large knowledge of the work and their full appreciation of its problems, gave inspiration and stimulus to every professional worker privileged to know them and to listen to them. Rich, indeed, is the state that has such men upon its boards, and fortunate the schools that know them well, for conditions of professional dry rot and stagnation can scarce obtain in any school where men of their stamp concern themselves in the work and lend themselves to its counsels and direction.

With thirteen countries represented in the Conference, and with 224 registered delegates participating in its proceedings, forty of whom were foreigners, the gathering was an international one in the fullest and strictest sense. And that it was thus international in fact as well as in name, may be considered due quite wholly to the good management of those who, through employment of the machinery of the Colonial and Foreign Offices of the British government, in communication with the central governments of all the countries in the world, secured the appointment in goodly number of formally accredited governmental representatives to attend upon the sessions of the Conference. This course and action will doubtless serve as a precedent in the planning for, and the organization of, future international gatherings, to make them to the fullest extent representative and authoritative bodies.

It may be a question as to what idea or ideas promulgated at the Conference will have the greatest potential effect upon the future of deaf education, to mold it upon better, more practical, and more efficacious lines. Our own judgment is, that the ideas that will thus live and affect the work at large to its betterment, will be found in the two papers, descriptive, the one of the Danish system of deaf education, and the other of the organization and methods of the Pennsylvania Institution. It may be said safely that these two papers, each in its own way, produced a most profound impression upon the entire Conference, the first, Mr. Hanson's, as pointing the way to an ideal system of classification of pupils upon the basis of attainments and capacity for instruction, with their segregation in separate and independent schools, each school providing just the conditions and the methods for the easiest and most effective accom-

plishment of its work; and the second, Dr. Crouter's, as showing, equally clearly, the large possibilities, with the various superiorities over all others, of the oral method when prosecuted under proper oral conditions, and when the work is organized to the utilization of every advantage that lies in those conditions for the development in the deaf child of all the best that is in him.

Unfortunately, no provision was made by this meeting looking to the calling of future International Conferences. This we feel was a serious oversight, for if such gatherings are worth while, they are certainly worth such forethought and provision. Heretofore, all International Congresses or Conferences of educators of the deaf, have been sporadic affairs, having origin in some local impulse, and with no authority or responsibility outside some local acting power. This is primitive and haphazard in the extreme, and quite unworthy our work at its present stage of world interest and development. The very successes, moreover, attending Conferences so far held, only served to condemn the more the primitive methods employed in their organization, revealing as they do the large possibilities that would pertain to Conferences regularly called and organized upon a basis of authority and of centered responsibility and power. We have said that no provision was made for calling a future Conference, but possibly the action taken by this Conference in the appointment of an International Committee on Statistics, may be taken advantage of as furnishing—in the lack of any other provision—a body to which, by general consent, the authority may be conceded to make the call and appoint the time and place for the holding of the next Conference. This, we may say, has been suggested by persons who have consulted upon the situation, and it may be well to give it serious consideration. But still another suggestion has been made, or revived rather, for it was made at, or immediately after, the Paris Congress of 1900, with the same situation in hand, a suggestion to the effect that the Volta Bureau at Washington—as the one world institution in existence in connection with the work of deaf education—be made the agency, and, in its superintendent, the initial authority, for calling and arranging for future International Congresses of educators of the deaf. Possibly both these suggestions may be utilized finally, the International Committee and the Volta Bureau acting in conjunction in the matter, to the attainment of the desired end in view.

It was an important action taken, as it may be conceived, the appointment of an International Statistical Committee, whose work it

will be, in brief description, to gather and codify questions now in use for obtaining statistics relating to the deaf, then to formulate a simple and uniform series of questions, these to be later offered and recommended by the committee to governments and schools for their use in all statistical inquiries thereafter to be conducted by them. This action is one that will be far-reaching in its effects, and it is not difficult to foresee very important and valuable results flowing from it. The American members of the committee are Dr. E. A. Fay and Mr. F. W. Booth.

The joint meeting of the British Deaf and Dumb Association—composed of deaf adults—and the National Association of British Teachers, with the foreign members of the Conference attending by invitation, was an enjoyable occasion, and especially so to the foreign delegates for whom the experiences were in the main new. The proceedings were conducted in two languages, or rather in two forms of the same language, for the manual alphabet was used in conjunction with speech, the former for the benefit of the deaf, the latter of the hearing auditors. For us the only novelty was the employment of the double-hand alphabet, its exclusive employment moreover—for it was that from all practical points of view—as the silent form of language used. The joint session continued a full two and a half hours, and, without cessation for that time, the two forms of expression were used together synchronously, with each the exact and full transliteration of the other. Nor was there more than a barely noticeable slowing up of the spoken expression at times, to permit of complete interpretation. A remarkable thing was the apparent ease with which the whole thing was carried through on the part of the hearing teachers doing the interpreting, the task being, of course, the reading of the spelling of deaf speakers for the benefit of the hearing, and the spelling out on the fingers of the spoken addresses for the benefit of the deaf. We never knew this to be done in a similar use of the single-hand alphabet for any prolonged period, and for the average hearing teacher using the single alphabet it would be an utterly impossible task, even with the spelling and speaking carried along at three-fourths the speed maintained at this exhibition. But even more remarkable than all this was the attitude of the two or three hundred deaf, throughout the two and a half hours' session, an attitude of perfect and tireless attention, and to every appearance, of complete understanding of all that was said. At any rate, the evidence was abundant of this in the quick, general, and hearty applause, or laughter, as the case might

be, when the addresses called it out. We should state, to be perfectly accurate, that neither the silent addresses nor the interpretations of the spoken addresses were entirely signless, though practically so, for every once in a while a sign was used for an individual word or expression, such as "school," "deaf and dumb," "now," "formerly," "some," "can not," "others," "but," "worked," etc., etc.; we made a list of about twenty such words that were signed in the space of time while the speaker was delivering himself of approximately a thousand English words. These signs were employed simply, as it seemed to us, for purposes of short-cutting or catching up, and they came so infrequently that they in no way interfered with the English order of expression or disturbed the English sentence construction. The whole exhibition, lasting through the prolonged session, was an impressive demonstration of the command, or understanding at least, possessed by the adult British deaf of the English language; and not only that, but also of the superiority, for all the purposes of entertainment and incident culture, of the double-hand alphabet over other devices as a means of addressing large audiences of adult deaf-mutes.

A noteworthy convenience was the arrangement that provided the delegates, a few moments in advance of its reading, with printed proof-sheets of each paper presented. This arrangement, it was observed, was especially appreciated by the continental foreign delegates, whose eyes, by means of it, could follow the reading to the clearer understanding of all that their ears heard.

All in all, the Conference was a thoroughly well managed affair, and its success was, no doubt, primarily due to this fact. Certainly the National Association of Teachers of the Deaf may take just pride in the outcome and in the results of its enterprise, and it may be hoped that great benefits will return upon the Association, and accrue generally to the work of deaf education in Britain, because of the Conference having been held within its borders. F. W. B.

We are informed that copies of the Report of the International Conference at Edinburgh may be had through the Secretary, Mr. E. A. Illingworth, School for the Deaf, Henderson Row, Edinburgh. Price 75 cents. This will be a valuable volume, and a copy should be in every school library and upon every teacher's table.

VISITS TO EUROPEAN SCHOOLS.

It was the pleasure of the writer, in the course of a short European tour made the past summer incident to attendance upon the International Conference of Teachers of the Deaf at Edinburgh, to visit a number of schools for the deaf conveniently located relative to the itinerary followed. The tour, from the time of leaving America to the return, was made in companionship with Dr. A. L. E. Crouter and Mr. E. S. Thompson, of the Mt. Airy School, and the school visitations were likewise made in their company. The countries visited were Holland, Belgium, France, England, Scotland, and Ireland, in the order named, with a return to England at the last; and schools were inspected in the cities of Rotterdam, Brussels, Paris, Edinburgh, Glasgow, Dublin, London, and Margate, to the number of thirteen in all. However, as only six of the thirteen schools visited were in actual operation, with children at their tasks, the remaining seven schools being found closed for the summer holiday recess, our account will chiefly relate to what was seen at these six schools.

The first school that our itinerary allowed us to inspect was that at Rotterdam, on Amman street, in charge of Mr. A. F. Fehmers. This is a Day-school of 158 children, the pupils of the school either living at their homes or being boarded in carefully selected families, one, two, or three in a family, the majority of them being thus boarded. The school is Oral, with its classes taught mostly by men, who showed evidence of thorough preparation for their work, both in the way of general education and of professional study and training. We were especially struck with marked similarities in the methods of inductive language teaching practiced in the lower grades and those employed in like grades in our American schools, which in itself shows the tendency to solve the problems of our pedagogy in much the same way, regardless of the language employed and taught or of the country of its use. Trades are taught to the older pupils through a sort of apprenticing-out system, pupils going by ones, twos, or threes to selected shops in the city daily for a half-day period, the shop masters being paid a per capita amount for imparting instruction.

The next school visited was in Brussels, the Institut Royal des Sourdes-Muettes et des Aveugles, conducted by Sisters of the Order of St. Josephs, with Rev. Mother Maria at their head. Our welcome here was a most cordial one, and every facility was given us to

see the work in both the deaf and the blind departments of the school. There are about 200 deaf children under instruction, all taught by the Oral method except a few of the duller children, whose instruction is conducted by manual methods. The school is unique in the fact that two languages are employed and taught, the children being instructed in either French or Flemish, in accordance with the language spoken by the parents. Thus eight classes are instructed in French and six classes in Flemish. In the blind department especial attention is given to the study of music, and the several numbers rendered by the orchestra of thirty or more instruments were well enjoyed by the visitors.

In Paris it was naturally the famous National Institution for Deaf-mutes, founded in 1760, the Institution of De l'Épée and Sicard, and of associations with the names of Gallaudet and Clerc, that we wished to see. We found the school one of 263 pupils, all boys, with Mr. V. Collignon in charge as Director, assisted by Mr. Andre as Principal of the educational department, and a corps of twenty-four professors. We were impressed with the fact that the instructors are all men, and it seemed not a little strange to us, accustomed always to seeing our own younger deaf children in charge of women, to see here the primary classes in the hands of teachers of the sterner sex. The school is an Oral school. And as we write that simple sentence, the thought forces itself that the statement means far more as applied to this particular school than it does written of any other school in the world. For, as is well known, the school from its founding, in 1760, up to a recent period, about 1880, was a manual or sign school, possessing the distinction with the rest of being the birthplace of the De l'Épée sign-language as well as the place of its greatest development and most successful application. It was from this school that Gallaudet and Clerc, the latter a brilliant graduate and an accomplished teacher, brought the sign-language to America, where it became, and remained for many years, the bulwark and chief reliance of the educational curriculum of our schools. With this history in mind, the sights that met the eyes and the sounds that greeted the ears of the visitors were almost startling in their significance, marking and emphasizing as they did the great change, the revolution indeed, that had been wrought in the methods of this ancient school in the recent years. What, indeed, it may be asked, in the light of this revolution, may not time, and ideas, and men, through the natural evolution of things and of institutions, accomplish! The evidence of skilful teaching in the

articulation and lip-reading of the pupils was ample, and the understanding in the older classes of translated statements and questions put by the visitors showed a good knowledge of facts as well as of general language. The school possesses a complete series of language text-books compiled by its staff, of which the latest is "Language by Pictures," containing 600 illustrations, the work being especially adapted for use in primary classes.

The several schools next visited need only be mentioned by name, as it was the vacation period for them, and their pupils were away on their holidays. These were two schools in Edinburgh—the Henderson Row School and Donaldson's Hospital; the Glasgow Institution; two schools in Dublin—the Cabra and the Glasnevin schools; and two schools in London—the Homerton Residential school and the Oak Lodge school for girls. At all these schools we were most pleasantly received by the headmasters or by members of the staff, and the generally ample and well-ordered buildings and grounds were inspected with interest.

The Jews' Deaf and Dumb Home, London, under the charge of Mr. S. Kutner, was found in full operation. The school is beautifully located in West London, with ample and well-arranged buildings and extensive, well-kept grounds. It is an Oral school, as it has been since its founding, in 1865, by Baroness Rothschild. Time permitted our seeing only the advanced class in school, and, made up almost wholly, if not wholly, of congenitally deaf children, averaging seven years in school, and none older than sixteen years, the work compared very well, it may be said, with the best work of children of similar age in our American schools. The speech and lip-reading were especially good, and the arithmetic work, mental and written, was quick and accurate, with the principles well understood, as was evidenced by the ready solution of written problems given the pupils, some of them unusual or unfamiliar in form.

While able to see but one of the Public Day-Schools of London, the system of schools is such that this one may properly be taken as a type of all the rest. The one inspected is known as the Hugh Myddleton School, and while the deaf children attend the school with hearing children in the same building, they form a group sufficiently large to require, as they in fact have, accommodations quite by themselves. The school is in charge of an experienced man as Principal, Mr. J. W. Fisher, and contains some ninety pupils in nine classes, the children ranging in age from seven to thirteen years. In the Kindergarten, however, pupils were present as young as five.

The school is Oral, and covers six grades, or the work of six years. Located more or less centrally with reference to a certain district to be accommodated, the school is attended by the deaf children of proper age living in the district, and they travel various distances, chiefly by steam and tram cars. The expense of transportation of the children is borne by the city government through use of celluloid coins issued to the children daily. A lunch is provided for the deaf children, cooked in a kitchen in the school, and served at noon on neat tables in the wide, well-lighted hallway. Some six hundred and twenty deaf children are thus accommodated in the several day-schools located in the various sections of London, all under the supervision of a single head, Mr. Benj. P. Jones, and all pursuing the same graded course of instruction. This London system, however, embraces more than has been outlined above, as it makes provision, separately and at special centers, for all the deaf children who, because of having reached the age of thirteen, are not longer admitted to the regular day-schools. There are thus two schools for older children which, receiving their pupils at thirteen, retain them until they reach the maximum school age of sixteen. These schools, one at Annerley for boys and the other at Oak Lodge for girls, are boarding-schools, though there are day pupils attending each. The two chief advantages of thus centralizing the instruction of the older deaf children in London are, to secure good grading, and to make provision adequately and economically for industrial training. But still a third school enters into the system, both to complete it, and to enable it as a whole to work with the least amount of friction and consequent waste. This is the Homerton Residential School, in charge of Mr. Frank G. Barnes. The school provides for backward children primarily; but also for those children of London whose home life is considered not favorable to their best advancement in the regular day-schools; also, again, for children accounted incorrigible. It is, in brief, a special school for special children, or children requiring special study, methods, and skill to bring them to the best that is in them; at the same time, it is a school that relieves all the other schools of the city of their misfits, to the very great advantage, as it has been proven, of all concerned. There are about seventy children accommodated, taught orally in cases where there is capacity for acquiring speech, and manually in the cases where this capacity is lacking. Space only permits mentioning two additional features of the London deaf school system: first, the weekly Parents' Meetings held at the several schools, in which, under the

guidance of the principals in charge, the home life of the children is brought into coöperation with their school life in ways to make the home activities effective as a factor and a force in all the work of the school instruction; second, the Night Schools established for the benefit of the adult deaf, which are held for the most part at the regular schools and are conducted by the teachers connected with them. All in all, it is little enough to say that the London deaf school system, as we saw it and learned of its scope and plan, impressed us most favorably, and we shall be glad to know more of it, and to have our readers learn more of it, which they will be permitted to do through a special article which has been promised us, and which will undoubtedly cover the subject fully and in detail.

The last school visited in our tour was the British Asylum for the Education of the Deaf and Dumb, located at Margate, under the direction of Dr. Richard Elliott, as Headmaster. The seat of the school was formerly at Old Kent Road, London, and it is the oldest school in the kingdom, the date of its founding being 1792. It is also the largest school in the kingdom, the present enrollment being 348. The methods of the school are oral and manual, 289 of the pupils being taught orally, with the remaining 59 taught manually. The chapel instruction is given orally to the oral pupils, and manually to the manual pupils. Generally the work of the school is conducted upon lines similar to those followed in our American oral schools, and with results quite similar, grade for grade. Naturally, on account of the fact that the school life of the British deaf ends at the age of sixteen, the advanced work carried on with our American pupils between the ages of sixteen and twenty-one was not here in evidence. Time permitted inspection of only a few of the oral classes, with rapid passing from grade to grade, until the highest class was reached—a class of eleven boys, fifteen years old, their eighth year in school, and all but two congenitally deaf, or deaf in early childhood before learning to speak. An hour was given to questioning these lively youngsters on their studies, principally history, geography, and arithmetic, all by speech, and with results that any teacher or any school could justly be proud of. In truth, we do not recall, in all our observation and experience, a class of deaf children of their age and of their years of schooling farther advanced or more intelligently responsive. Dr. Elliott, who has been engaged in the work of educating the deaf for half a century, having entered upon it in 1857 when but seventeen years of age, is still vigorous and as full of zeal as any man of half his years. He is the author

of a number of text-books in use in his own and other schools throughout the kingdom, including among them one with the title, "A Series of Lessons in Articulation and Lip-Reading," which is a complete manual upon the subject for the use and guidance of teachers.

We cannot close this account of our visitations to the various schools without an assurance to all in charge of them and connected with them of our deep appreciation of the privileges granted us and of the courtesies shown us; and particularly are we grateful to Mr. Barnes, of London, for his services and kindness in bringing us, in the brief time at our disposal, to so full and clear a knowledge of the London deaf school system. In all of which expression we are sure we speak also for Dr. Crouter and Mr. Thompson, who shared our privileges and experiences. F. W. B.

CHANGES IN PRINCIPALS.

The new school year opens with a change in the Superintendency of the Nebraska School for the Deaf, Mr. C. E. White, recently a teacher in the Minnesota school, succeeding to the position formerly occupied by Mr. R. E. Stewart. No reasons are given for the retirement from the position of Mr. Stewart. Mr. White comes to the place with excellent preparation in the way of education and experience, being a college graduate and a graduate of the Normal course of Gallaudet College, and having had eight years' experience as a teacher in the Minnesota school, most of the time at the head of the oral department. Mr. Stewart, we understand, returns to the position formerly held by him in the Iowa school as an instructor.

The marriage of Miss Anna E. Schaffer making necessary her resignation of the office of State Inspector of Deaf Schools of Wisconsin, the position has been filled by the selection of Prof. A. J. Winnie, formerly of the Public Schools of Racine, Wis. Mr. Winnie does not come to the position wholly unfamiliar with the work, for he has had for some years under his immediate charge and observation, in the school of which he was Principal, one of the regular State Day-schools of which he is now the Inspector. Mr. Winnie, we understand, won the appointment to the Inspectorship through record made in the regular civil service examination, which, of couse, is to his credit, and which encourages the hope, moreover, that the office will be conducted with success equal to that attained by his immediate predecessor.

Miss Frances E. Gillespie having resigned the Principalship of the Mystic, Conn., Oral School, to be married, her position is hereafter to be filled by Miss Eleanor B. Worcester, assisted by her sister. The Misses Worcester are sisters of the well-known Alice C. Worcester, formerly of the Northampton School, whose untimely death deprived the work of one of its greatest teachers.

JOHN HITZ HONORED.

The many friends of Mr. John Hitz among our readers will heartily unite with us, we feel assured, in greetings and congratulations to him upon his having reached the eightieth milestone upon life's journey. His work as head of the Volta Bureau has made his name a familiar one throughout the profession of teachers of the deaf, and his genial presence at their meetings has given him widespread personal acquaintance among them. Yet few probably know him and of his long life and useful and honorable career, outside his connection with the Volta Bureau and beyond the services he has rendered the cause of the deaf. We are therefore the more pleased that an opportunity presents itself for giving something approximating a complete life-sketch of Mr. Hitz, which we are able to do in the reprinting of the following well-written newspaper account of the reception tendered him by his Washington friends upon the occasion of the recent anniversary of the day of his birth:

"A resident of Washington, for a longer period than is embraced in the allotted span of man, three-score years and ten, John Hitz, superintendent of the Volta Bureau, 35th street and Volta Place, was the central figure in a unique celebration at the Bureau last night when the three Swiss societies of the District united to do him honor on the occasion of his eightieth birthday anniversary.

"The function was held in the main hall and reading-room of the Bureau, which was appropriately decorated with entwined Swiss and American flags, and with flowers. O. Sahli, chancellor of the Swiss legation, made the principal address on behalf of the united Swiss colony in the capital, and Emil Wellauer, secretary of the Gruetli Verein (Swiss Mutual Beneficial Society), and Mrs. Grass, president of the Stauffacherin Reading Circle, also spoke, expressing the sincere regard of themselves and their associates for Mr. Hitz. Several appropriate gifts were presented to Mr. Hitz.

"John Hitz was born in Davos, Switzerland, and he was brought to this country in a general immigration of the Hitz clan in 1881.

The family settled at once in Washington, and Mr. Hitz has resided here ever since. From 1853 to 1864 his father, John Hitz, was consul general to the United States from Switzerland, and young Hitz acted as his secretary. Upon his father's retirement the son became consul general, and he held the post until 1882.

"Mr. Hitz was president of the German Relief Society in the District of Columbia during the civil war, and several years of his life were also devoted to commercial and banking business.

"In 1890 Mr. Hitz became associated with Alexandria Graham Bell, who has set aside the famous Volta prize of 50,000 francs, given to him by the French government in recognition of his invention of the telephone, and designated it the 'Volta Fund.' This fund was intended to be used for the benefit of the deaf, and the ultimate result was the formation of the Volta Bureau.

"Early work 'for the increase and diffusion of knowledge relating to the deaf' was conducted in the laboratory at Dr. Bell's home, 35th and Q streets, but May 1, 1893, ground was broken on the corner opposite Dr. Bell's home for the Volta Bureau. Miss Helen Keller lifted the first spadeful of earth on that occasion. In about one year the building was completed, and Mr. Hitz was installed as superintendent, a position which he has held ever since.

"The Volta Bureau has become a center for the collection and distribution of knowledge relating to instruction of the deaf and a veritable storehouse of statistical information concerning the blind and deaf throughout the country and the world. Complete reports are there from the United States censuses of 1890 and 1900, showing the number of deaf persons in each state and territory of the Union.

"Mr. Hitz has made his home in the bureau building, and his efforts have gone far toward increasing the scope of the work. By reason of his long life in the capital Mr. Hitz has a fund of interesting stories concerning the growth and development of the city. In the early fifties his grandfather conducted a typical Swiss dairy, with a herd of fifty cows, on what is now Washington Heights. An uncle of Mr. Hitz owned the whole crown of the hill along the line of the present Columbia road, and in 1853, in settling up the latter's estate, Mr. Hitz sold sixteen and one-half acres of land, including what is now the Dean place, for $10,000 cash. His many friends in the city of all nationalities extend him felicitations."

F. W. B.

THE SUMMER SCHOOL AT NORTHAMPTON.

We are pleased to report the recent session of the Summer School—June 7 to July 4—at Northampton a success in every way. There was a large attendance of teachers, there being twenty-six members in the class, and all of them with the advantage of previous experience in the work. It is of course difficult, impossible indeed, to estimate the value of this summer school training course, either to the individual teachers whose good fortune it was to pursue it, or to the work at large that must eventually benefit from it greatly; and if the school can be continued, twenty to thirty teachers attending with each recurring summer, it can not but have in time the profoundest effect upon the work of deaf education, to unify it and to standardize it to a high grade throughout all the schools in the land.

We are glad also to report upon the regular Normal School Department of the Northampton School, conducted under the auspices of the American Association, that a full class of ten students, taking the course of a year, were graduated in June, being granted certificates as to their attainments, over the signatures of officials of Clarke School and of the Association. The class now pursuing the course, to graduate the coming June, also consists of ten students, the full number admissable. F. W. B.

MR. MATHISON INVESTIGATED AND VINDICATED, BUT THE SYSTEM OF ORAL INSTRUCTION PRONOUNCED DEFECTIVE.

The report of an investigation of the administration of Mr. R. Mathison, while Superintendent of the Belleville, Ontario, School for the Deaf, made by the Commissioner of Education conducting it, is a strong personal vindication of Mr. Mathison. It however pronounces the system of oral instruction pursued in the school as defective, and makes recommendations looking to radical changes in the methods of the school. The following quotations made from the published report cover the points mentioned:

"Of the Institute for the Deaf and Dumb the report, in part, says: 'I attribute much of the success of Mr. Mathison's system of instruction to his personal attention to the students before and after they graduate from the institution. The same method in other hands might not work out so successfully.' The commissioner, after summing up the evidence on the system of instruction, thus reports:

'I find upon the evidence, after giving this charge most serious consideration and from perusal of numerous well-written articles upon this subject by men who have given the education of the deaf and dumb special attention, that the system of teaching oralism in this institution was defective, but at the same time permit me to add that I find no fault with Mr. Mathison in this respect. He has for many years been anxious to introduce the oral method, but he has not received the support he deserved, and has been handicapped by lack of teachers and proper and sufficient accommodations.'

"The Commissioner makes the following recommendations: 'The adoption of the oral system of instruction, with requisite additional teachers, there being about 112 pupils capable of receiving this training; the necessary separation of the differently trained pupils to be provided by the erection of two inexpensive buildings on either side of the main buildings; a higher grade of instruction both in the manual and in the oral system; in industrial work new branches of training to be introduced, with fixed hours of instruction and periodical reports on the progress of each student; extension of the school course from seven to ten years; a proper system of ventilation for the main building; greater attention to the physical development of the children; the formation of a cadet corps, with instruction in military tactics, to improve the physique of the boys; in awarding the contract for meat supplies, provision to be made for accepting only first-class quality; more variety in the supply of fruit; fire escapes to be provided for the main building; a Board of Superintendents, consisting of the Mayor of Belleville, the County Judge and the Principal of the Collegiate Institute, to be appointed with authority to make periodic inspections; the name of the institution to be changed to the Ontario School for the Deaf and Dumb.'"

A NEW DAY-SCHOOL AT SEATTLE, WASHINGTON.

Information comes of the recent establishment of a Day-school, by the Board of Education of the city of Seattle, Washington. It is located in the Longfellow School, Twentieth and East Thomas streets, and is in charge of Miss M. Ina Smith, late of the Sacramento, Cal., Day-school, and formerly of the Milwaukee school. Miss Smith, writing of date September 21, says: "Although the school has been established less than three weeks, it now has an enrollment of twelve pupils. I expect an assistant soon; then I shall be able to admit several other pupils who are now on the waiting list."

THE ANNUAL MEETING OF THE ASSOCIATION.

At the annual meeting of the American Association to Promote the Teaching of Speech to the Deaf, held in adjourned session in New York City, at the Lexington Avenue School for the Deaf, on June 18, 1907, the following actions were taken:

Upon resolution, formally presented and adopted, the following named persons were elected Directors to serve for the term which will expire at the close of the Summer Meeting, 1910: Caroline A. Yale, Harriet B. Rogers, Edmund Lyon, Richard O. Johnson, and Job Williams.

Upon motion, duly adopted, it was resolved that President A. L. E. Crouter, General Secretary F. W. Booth, and Mr. E. S. Thompson be empowered to represent the American Association to Promote the Teaching of Speech to the Deaf at the International Conference of Teachers of the Deaf at Edinburgh, July 30 to August 2, 1907.

WANTED: An experienced oral teacher for seventh grade pupils in an oral school. Address E, care of the ASSOCIATION REVIEW.

WANTED: A supervisor of boys in a school for the deaf. Address R, care of the ASSOCIATION REVIEW.

A new edition of the work on "Formation and Development of Elementary English Sounds," by Caroline A. Yale, has been published by the Association, and it can now be supplied upon application to the General Secretary. Price for single copies, 25 cents.

Copies of "The Mechanism of Speech," by Alexander Graham Bell, on sale at $1.00 per copy. Address orders to F. W. Booth, General Secretary, 1525 35th St., N. W., Washington, D. C.

Tongue manipulators, used by articulation teachers, for sale. Price, 40 cents each. Address the General Secretary.

Reprints in pamphlet form of "My List of Homophenous Words" (words that look alike on the lips), by Emma Snow, may be obtained through the office of the General Secretary. Price for single copies, 25 cents.

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THE ASSOCIATION REVIEW

PUBLISHED BY THE AMERICAN ASSOCIATION TO PROMOTE THE TEACHING OF SPEECH TO THE DEAF

FRANK W. BOOTH, EDITOR

December, 1907

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F. W. BOOTH,

1525 Thirty-fifth St. N. W., Washington, D. C.

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THE ASSOCIATION REVIEW.

VOL. IX, No. 5.

DECEMBER, 1907.

THE REAL ROMANCE OF THE TELEPHONE, OR WHY DEAF CHILDREN IN AMERICA NEED NO LONGER BE DUMB.[1]

BY FRED DE LAND.

CHAPTER XVIII.

SARAH FULLER AND HELEN KELLER.

While Mrs. Mary Swift Lamson, a special teacher of Laura Bridgman (and who, by the way, had introduced Miss Rogers to Mrs. James Cushing in 1864, and to Mr. Hubbard in 1865), was abroad in the summer of 1889, Miss Rogers, through a letter of Mr. Lars Havstad of Christiania, learned of a blind deaf-mute, in Norway, Ragnhild Kaata, who was being taught to speak. This seemed so wonderful that Miss Rogers wrote Mrs. Lamson asking if she could not see Mr. Havstad when in Christiania and learn more of this case. This was done and Mr. Havstad arranged a meeting between Mrs. Lamson, the child, and her instructor, Mr. Elias H. Hofgaard. Here Mrs. Lamson learned how ungovernable and miserable the child had been until at sixteen years of age she was admitted to the institution for the deaf at Hamar, in January, 1888, and how Mr. Hofgaard, finally winning her confidence, had taught her to write, speak, and read by touch from the lips in the eighteen months prior to Mrs. Lamson's visit.

Mrs. Lamson was so impressed by this interview that shortly after her return to Boston, in 1890, she called on Miss Sullivan and her pupil, Helen Keller, and related the story of the Norwegian girl to Helen and the earnestness with which she was striving to improve her conversational powers. In "The Story of My

[1] Commenced in the October, 1905, number.

Life," Helen has written: "Mrs. Lamson had scarcely finished telling me about this girl's success before I was on fire with eagerness. I resolved that I, too, would learn to speak. I would not rest satisfied until my teacher took me, for advice and assistance, to Miss Sarah Fuller, principal of the Horace Mann School. This lovely, sweet-natured lady offered to teach me herself, and we began the twenty-sixth of March, 1890.

"Miss Fuller's method was this: she passed my hand lightly over her face, and let me feel the position of her tongue and lips when she made a sound. I was eager to imitate every motion and in an hour had learned six elements of speech: M, P, A, S, T, I. Miss Fuller gave me eleven lessons in all. I shall never forget the surprise and delight I felt when I uttered my first connected sentence, 'It is warm.' True, they were broken and stammering syllables; but they were human speech. My soul, conscious of new strength, came out of bondage, and was reaching through those broken symbols of speech to all knowledge and all faith. .... But it must not be supposed that I could really talk in this short time. I had learned only the elements of speech. Miss Fuller and Miss Sullivan could understand me, but most people would not have understood one word in a hundred. Nor is it true that, after I had learned these elements, I did the rest of the work myself. But for Miss Sullivan's genius, untiring perseverance and devotion, I could not have progressed as far as I have toward natural speech...."

At the World's Congress of Instructors of the Deaf (1893), Dr. Richard Elliott, head-master of the Institution for the Deaf and Dumb, Margate, England, in holding that signs have no place in the educational instruction of deaf children, said: "May I not quote the case of Miss Helen Keller as an instance of what concentrated attention to and actual use of 'language,' with all its boundless capabilities, can do, when wisely and exclusively used? And further, may I not with good reason infer that, if it had been the unfortunate lot of that young lady to fall into the hands, for education, of an ardent advocate of the 'sign-language,' her marvellous progress, which is the wonder of the age, would not have existed; and, in place of it, we should have had another instance of the use of the 'language of signs' and another case of the glimmering of knowledge and intelligence they are capable alone of giving."

In 1894, Miss Sullivan, in explaining the progress Helen had made to the delegates to the Chautauqua meeting of the American Association, said:

"Language grows out of life, out of its needs and experiences, and its joys and sorrows and its dreams and realities. At first my little pupil's mind was all but vacant. Up to the time when I began to teach her, she had no means of registering on its blank pages her childish impressions and observations. She had been living in a world she could not realize. *Language* and *knowledge* are like Siamese *twins*,—they are indissolubly connected; they are interdependent. Good work in language presupposes and *necessitates* a real knowledge of things. As soon as my little pupil grasped the idea that everything had a *name*, and that by means of the manual alphabet these names could be transmitted from one to another, I proceeded to awaken her further interest in the *objects* whose names she learned to spell with such evident joy. *I never taught language* for the PURPOSE of *teaching it:* but invariably used language as a medium for the communication of *thought;* thus the learning of language was *coincident* with the acquisition of knowledge. In order to use language intelligently, one must have something to talk *about*, and having something to talk about is the result of general *culture;* no amount of language-training will enable our little children to use language with ease and fluency unless they have something clearly in their minds which they *wish* to communicate, or unless we succeed in awakening in them a desire to know what is in the minds of *others*. From the very first, Helen was eager and enthusiastic in the pursuit of knowledge. In the little story of her life she says: 'I was never still during the first glad days of my freedom. I was continually spelling and acting out words as I spelled them. I would run, skip, jump, and swing, no matter where I happened to be. Everything I *touched* seemed to *quiver with life*. It was because I saw everything with the new, strange, beautiful sight which had been given me.'

"She had one advantage over ordinary children, nothing from without distracted her attention; so that each new thought made upon her mind a distinct impression, which was rarely forgotten. At first I did not attempt to confine my pupil to any systematic course of study. I felt that she would accomplish more if allowed to follow her own natural impulses. I always tried to find out

what interested her most, and made that the starting-point for the new lesson, whether it had any bearing on the lesson I had planned to teach or not, and her eager inquiries often led us far away from the subject with which we began. During the first two years of her intellectual life I required Helen to write very little. In order to write with profit to himself a child must have something to write about, and having something to write about, necessitates some mental preparation. The memory must be stored with ideas, and the mind must be enriched with knowledge before writing becomes a natural and pleasurable effort. Too often, I think, children are required to write before they have anything to say. Teach them to think and read and talk without self-repression, and they will write without self-consciousness."

At the request of the superintendent of public schools, Miss Fuller prepared a statement of the instruction she had given to Helen Keller, which reads, in part, as follows:

"The first intimation to me of Helen Keller's desire to speak was on the 26th of March, 1890, when her teacher, Miss Sullivan, called upon me with her and asked me to help her to teach Helen to speak; for, said she, 'Helen has spelled upon her fingers: I must speak.' She was then within three months of being ten years old. Some two years before, accompanied by her mother, Mr. Anagnos and Miss Sullivan, she had visited the Horace Mann School for the Deaf, when her ready use of English, and her interest in the children, had suggested to me that she could be taught to speak. But it was not then thought wise to allow her to use her vocal organs. Now, however, that the attempt was to be made, I gladly undertook the work. I began by familiarizing her with the position and condition of the various mouth parts, and with the trachea. This I did by passing her hand lightly over the lower part of my face and by putting her fingers into my mouth. I then placed my tongue in the position for the sound of ĭ in it, and let her find the point, as it lay perfectly still and soft in the bed of the jaw, just behind the lower front teeth, and discover that the teeth were slightly parted. After she had done this I placed one of her forefingers upon my teeth and the other upon my throat, or trachea, at the lowest point where it may be felt, and repeated the sound ĭ several times. During this time, Helen, standing in front of me in the attitude of one listening intently, gave the closest attention to every detail; and when I ceased making the sound her fingers flew to her own mouth and

throat and after arranging her tongue and teeth she uttered the sound ĭ so nearly like that I had made, it seemed like an echo of it. When told she had given the sound correctly she repeated it again and again. I next showed her, by means of her sensitive fingers, the depression through the centre of the tongue when in position for the sound of ä, and the opening between the teeth during the utterance of that sound. Again she waited with her fingers upon my teeth and throat until I sounded ä several times, and then she gave the vowel fairly well. A little practice enabled her to give it perfectly. We then repeated the sound of ĭ and contrasted it with ä. Having these two differing positions well fixed in her mind I illustrated the position of the tongue and lips while sounding the vowel ô. She experimented with her own mouth, and soon produced a clear, well-defined ô. After acquiring this she began to ask what the sounds represented, and if they were words. I then told her that ĭ is one of the sounds of the letter i, that ä is one of the sounds of the letter a, and that some letters have many different sounds, but that it would not be difficult for her to think of these sounds after she had learned to speak words. I next took the position for ä, Helen following as before with her fingers, and, while sounding the vowel, slowly closed my lips, producing the word *arm*. Without hesitation she arranged her tongue, repeated the sound, and was delighted to know that she had pronounced a word. Her teacher suggested to her that she should let me hear her say the words *mamma* and *papa*, which she had tried to speak before coming to me. She quickly and forcibly said, '*mum mum*' and '*pup pup*'! I commended her efforts, and said that it would be better to speak very softly, and to sound one part of the word longer than she did the other. I then illustrated what I wanted her to understand by pronouncing the word *mamma* very delicately, and at the same time drawing my finger along the back of her hand to show the relative length of the two syllables. After a few repetitions the words *mamma* and *papa* came with almost musical sweetness from her lips.

"This was her first lesson. She had but ten lessons in all, although she was with me at other times talking freely, but not under instruction. The plan was to develop, at each lesson, new elements, review those previously learned, listen to all of the combinations she could make with the consonants as initial and final elements, and construct sentences with the words resulting

from the combinations. In the intervals between the lessons she practised these with Miss Sullivan. She was an ideal pupil, for she followed every direction with the utmost care, and seemed never to forget anything told her. On the day she had her seventh lesson (April 19th) she and Miss Sullivan were invited with me to lunch at the house of a friend. While on the way there Miss Sullivan remarked that she wished Helen would use the sentences she had learned, and added that she seemed unwilling to do so. It at once occurred to me that the cause of her reluctance was her conscientious care to pronounce every word perfectly; and so, in the moments I had with her during the visit, I encouraged her to talk freely with me while I refrained from making corrections. This had the desired effect. In going about the house of our friend she asked a great many questions, using speech constantly. In the presence of all she told of her studies, her home, and her family. She also told of a visit to Dr. Oliver Wendell Holmes a short time before when she 'talked' to him. Noticing her words as she spoke, there were but four which I did not readily understand. These I asked her to spell on her fingers. Her enjoyment of this, her first experience in the real use of speech, was touchingly expressed in her remark to Miss Sullivan on her way home, 'I am not dumb now.' In a conversation, some two weeks later, with Dr. Bell, Miss Sullivan, and myself, a still greater freedom in the use of speech was noticeable. Miss Sullivan fully appreciated the victory gained; for she wrote to Mr. Anagnos, two months after Helen had taken her first lesson, 'Think of it! Helen achieved in less than two months what it takes the pupils of schools for the deaf several years to accomplish, and then they do not speak as plainly as she does.'"

Six years after Helen Keller received the first lessons from Miss Fuller, she delivered a brief address at the summer meeting of the American Association, at Mt. Airy, saying, in part, "If you knew all the joy I feel in being able to speak to you today, I think you would have some idea of the value of speech to the deaf, and you would understand why I want every little deaf child in all this great world to have an opportunity to learn to speak. I know that much has been said and written on this subject, and that there is a wide difference of opinion among teachers of the deaf in regard to oral instruction. It seems very strange to me that there should be this difference of opinion; I cannot understand how

any one interested in our education can fail to appreciate the satisfaction we feel in being able to express our thoughts in living words. Why, I use speech constantly, and I cannot begin to tell you how much pleasure it gives me to do so.... It brings me into closer and tenderer relationship with those I love, and makes it possible for me to enjoy the sweet companionship of a great many persons from whom I should be entirely cut off if I could not talk...."

In the *Ladies' Home Journal*, for November, 1903, Helen Keller explained some of the things she would like to do after graduating at Radcliffe. Among other most interesting statements, she wrote: "I have discovered that the material with which we work is everywhere and in abundance. I have felt the joy of the strong man who grasps the reins in his hands and drives the forces that would master him. Our worst foes are not belligerent circumstances, but wavering spirits .... the occupations I can engage in are few, but into each one I can throw my whole strength.... I am very much interested in work that women may do in the world.... I think the degree of a nation's civilization may be measured by the degree of enlightenment of its women.... Above all must I interest myself in the affairs which concern the deaf and blind.... I often think I shall live in the country and take into my home a deaf child and teach him as Miss Sullivan has taught me. For years I have observed the details of her method and her example in word and deed has inspired me so that I feel that I could impart to a child afflicted like myself the power to see with the soul and understand with the heart. All his needs and difficulties would be intelligible to me since I know the darkness he sees and the stillness he hears. The road he must travel I have traveled; I know where the rough places are and how to help him over them. This would be the directest and most joyous way of doing for another what has been done for me.... No work, however, can mean so much to me as what I can do for the deaf and the blind."

On Helen Keller Day at the Louisiana Purchase Exposition, October 18, 1904, Miss Keller said, among other good things: "Many have been invited here because of learning, skill, or achievement; for their contributions to the beauty and art of the world. I am here, not for what I have done, but for what has been done for me—to raise me to the level of those that see and hear. I testify to what the good and grand have done for deprivation and infirmity. My evidence is of able men and women

who have done what they could to unstop ears, open eyes, give speech to the lips of the dumb and light to darkened minds. I enter with you into the community of living speech, and for the joy of speech I express my heartfelt gratitude.... God bless the nations that provide an education for all."

In "The Story of My Life," Helen Keller wrote: "When I was about six years old, my father heard of an eminent oculist in Baltimore, who had been successful in many cases that had seemed hopeless. My parents at once determined to take me to Baltimore to see if anything could be done for my eyes... When we arrived at Baltimore, Dr. Chisholm received us kindly; but he could do nothing. He said, however, that I could be educated, and advised my father to consult Dr. Alexander Graham Bell, of Washington, who would be able to give him information about schools and teachers of deaf and blind children. Acting on the doctor's advice, we went immediately to Washington to see Dr. Bell, my father with a sad heart and many misgivings, I wholly unconscious of his anguish, finding pleasure in the excitement of moving from place to place. Child as I was, I at once felt the tenderness and sympathy which endeared Dr. Bell to so many hearts, as his wonderful achievements enlist their admiration. He held me on his knee while I examined his watch, and he made it strike for me. He understood my signs, and I knew it and loved him at once. But I did not dream that that interview would be the door through which I should pass from darkness into light, from isolation to friendship, companionship, knowledge, love."

CHAPTER XIX.

Alexander Melville Bell's Visible Speech.

A factor that materially contributed to the success of the oral movement in America, and one that proved especially serviceable in paving the way for the immediate introduction, under favorable circumstances, of the teaching of articulation in sign institutions, and in gradually softening, if not in entirely dissipating, the antagonistic attitudes assumed by some of the teachers of signs and gestures in the older institutions, was the system of Visible Speech invented by Prof. Alexander Melville Bell. Visible Speech dealt with articulation pure and simple; it was not necessarily associated with lip-reading any more than it was with gestures and signs; nor would it take any part in the conflict between advocates of articula-

tion on the one hand, and teachers of signs and manual alphabets on the other. It was a simple, yet a scientific method, the comprehension of which aided in giving articulation to deaf-mutes. Thus it was welcomed when, in those pioneer days, oral teaching was scoffed at by those who believed in and endeavored to teach a language of signs which they claimed was "so natural that it becomes a part of the deaf, as much as speech is of the hearing, and may completely answer for every use of speech," a language which, when properly delineated, would, it was claimed, reveal "the inmost workings of the soul," while the "various thoughts and feelings, with their fainter and stronger shades of distinctive character (would) beam out through the eye, countenance, attitude, movement, and gesture."

Professor Bell's system of Visible Speech is a plastic yet comprehensive key to the correct pronunciation of English, or any other language, its applicability in linguistic studies being acknowledged through its use in educational institutions in many countries. Moreover, it affords a method of preserving a standard of pronunciation in all languages, for, guided by these symbols, sounds may be correctly uttered though the person giving them may never have heard the sound or known of such a sound. The forms of the symbols have direct reference to the particular vocal organs to be used and the definite position which the organs of speech must assume in the production of a given sound. Thus, once the simple basic principles are understood, it only becomes necessary to place the vocal organs in certain positions, and emit breath or voice to produce certain definite and intelligible sounds. There are only ten characters, and when combined, just as we combine certain of the twenty-six letters of the alphabet to form words, these symbolical representations of the elements of sound read: "Put your tongue in this position," or "put your lips this way," or "expel your breath in this manner," and such a sound will be the result. In the letters of other alphabets the little curves and straight lines composing the characters have no significance; but in Professor Bell's system each line and each curve pictorially represent the adjustment of the definite vocal organ to be used in the reproduction of a given sound. Thus the positions necessary for the vocal organs to assume in reproducing any sound which the human voice can articulate, can be represented by the symbolical abbreviations of *visible speech*, just as chemists represent the elements and their chemical combinations by the use of symbols acceptable the world over. In other words, the characters recall, not ideas, but positions of the vocal organ; they lead to correct articulation, which then leads to ideas and the expression of ideas.

In other words, the characters recall, not ideas, but positions of the vocal organs; they lead to correct articulation, which then leads to ideas and the expression of ideas. In the words of a prominent teacher: "What is wanted in the case of deaf-mutes is something to start their vocal machinery and guide its action. That is precisely what Mr. Bell's symbols do. Just as the blind by the palpable alphabet take in printed languages, so the deaf by Visible Speech take in the oral languages. There is a difference in mode, none in principle. In each case a sense possessed takes the place of a sense not possessed."

Professor Alexander Melville Bell was born in Edinburgh, Scotland, on March 1, 1819, and died in Washington, D. C., on August 7, 1905. Although eighty-six years of age, he remained hale and hearty almost to the end. For nearly seventy years he was in the harness, yet remained an acknowledged authority on correct pronunciation, on the teaching of articulation to the deaf, and on all matters appertaining to elocution. Students in many universities, including Edinburgh, Oxford, Johns Hopkins, and Columbia, have enjoyed his lectures, while twenty-six of his text-books and charts are in daily use in many schools. His system of Visible Speech is the standard with many teachers of the deaf, and in many foreign schools for the hearing, is being "applied in Japanese institutions to the teaching of all foreign languages," and is used by missionaries in China.

The evolution of his system of Visible Speech began in 1842, when he announced the formulation of a new theory of articulation and vocal expression, based on the position the respective vocal organs assume during speech. During the next seven years he improved and developed this theory into practicable form. Then, after many and varied experiments in the formation of the elementary sounds by the vocal organs, in 1849, he published it under the title of "A New Elucidation of the Principles of Speech and Elocution," and quickly won much praise from discriminating educators who appreciated the scientific value and the originality of his work. Of the purity, charm, and perfection of his speech, an eminent professional colleague said: "I have never before, and I do not know that I have since, heard English spoken with the ease and delicate precision that so distinctly marked the speech of Mr. Bell. His clear-cut articulation, his flexibility of voice, and finely modulated utterance of English, was an exemplification of what efficient and long-continued training of the vocal organs will do for human speech, and how charming the result."

Miss Fuller has written that "the winning personality, gracious manner, and cordial greeting that awaited every one who sought Professor Bell's presence were the expression of a sympathetic, generous spirit which gave him immeasurable power over his students."

From 1843 until 1865, Professor Bell lectured on elocution and the principles of speech in Edinburgh University, and other educational centers. Then, following the death of his father in London, in 1865, he transferred his classes in Edinburgh to his eldest son, Melville James Bell, moved his family to London and accepted the appointments of professor of vocal physiology and lecturer on elocution in University College. There he completed his development of the science of universal alphabetics, and published it under the title of "Visible Speech," in the belief that it would be serviceable not only in teaching English, but prove "equally applicable to all languages."

In 1865 Alexander Bell, the grandfather, passed away. So Graham's father transferred his classes and private pupils in Edinburgh to his eldest son, Melville James Bell, and moved his family to London, where he accepted the appointment of professor of vocal physiology and lecturer on elocution in University College, and also assumed the professional duties left by his distinguished sire. His assistant in this work was his youngest son, Edward Charles Bell, who fell a victim to the white plague in 1867, when nineteen years of age. The death of this brother and the father's need of an intelligent and capable assistant compelled Graham to relinquish for a time all thought of collegiate degrees, and to move to London and become the professional assistant of his father. However, he succeeded in taking a course in anatomy at the University College and in matriculating at the London University, in 1868.

Miss Susanna E. Hull was a pupil in one of Professor Bell's classes in phonetics. In 1863 she became interested in the deprivations deaf children suffer by reason of their infirmity, and, in the hope of benefiting the helpless, opened a private school for the instruction of deaf children at 102 Warwick Gardens, South Kensington, London. Expressing her belief that the system of Visible Speech used by Professor Bell in teaching phonetics would prove serviceable in teaching speech to the deaf, the father, perceiving the value of her suggestion, sent his son Graham to introduce and apply the system in her school. And it was this brief experience in teaching articulation to deaf children that proved to be the broad stepping-stone to the invention of the electric-speaking telephone in Massa-

chusetts rather than in England. For "no difficulty was found in giving the idea of the symbols to four children, the oldest about twelve and the youngest about seven years of age. And nearly all the elementary sounds of English were obtained from them *in a few days*. . . . Very soon her pupils learned to speak, those who were born deaf even better than those who had become so through fever, and they could also read a few sentences from the lips."

At this time, while Professor Bell and his son and Miss Hull all had great faith in the possibilities of teaching the congenital deaf to articulate correctly, neither one possessed a strong belief in the availability of speech-reading. Referring to these early beliefs and efforts, Miss Hull said: "At last Miss Rogers came (in 1870) and gave me fresh hope. She told me facts from her own knowledge and observation, and her faith kindled mine."

In December, 1872, Miss Hull sailed from England for a visit to Clarke School, and during her stay at Northampton her doubts and difficulties concerning speech-reading were all removed by witnessing Miss Rogers' success in teaching her pupils to read speech, and so convincing were the proofs that she adopted the American oral method as the means she "had so long sought, by which the deaf would be most fully restored to home and social life."

Shortly after he succeeded to the Edinburgh branch of the profession, Graham's brother, Melville James Bell, became consumptive, and in 1870 this disease culminated in his death. Thus it became necessary to close or dispose of the Edinburgh offices.

Meanwhile the father was becoming alarmed about the physical condition of his only remaining son, Graham. For overstudy in connection with his college classes, a too constant application to certain telegraphic experiments, and researches in electricity which he had undertaken, and an ardent devotion to the interesting and successful work of teaching deaf children to talk, so seriously impaired the young student's health that his father decided that an immediate change of climate and a cessation from all study was imperatively necessary, if health was to be regained. And because in 1841-42, the father, after a severe illness, had spent two years in Newfoundland, and had "found its bracing climate and pure air so beneficial that the visit undoubtedly laid the foundation of robust manhood," he decided to move to America.

In July, 1870, Alexander Melville Bell resigned the professorships he held in London, transferred his pupils, disposed of his property, and moved his family to Canada. There he established a new home in the country at Tutelo Heights, about four miles north of the

city of Brantford, and shortly thereafter he secured the appointment of professor of elocution in Queen's College, in Kingston.

Long walks and rides in the crisp Canadian climate, combined with abundant sleep in the open air or in freely ventilated rooms and the nutritious food which the watchful mother presented in such palatable form, soon assisted the tall, slender, sickly student of twenty-two well along on the road to good health.

Graham Bell remained in Canada until March 31, 1871, and during these eight months he spent much time on the reservation of the Mohawk Indians, near Brantford, and there made a study of their language. Through the kind assistance of Daniel Doxtater and Miss Lydia Hill, two educated Mohawks, he symbolized in Visible Speech the pronunciation of many words used by these Indians.

Meanwhile the desire to be earning an income, and not to be dependent on his father's bounty, impelled Graham Bell to apply to certain large institutions for the deaf in the United States for an opportunity to show what his father's system of Visible Speech might accomplish in facilitating the teaching of articulation to deaf children. His application was not favorably considered for three reasons: (1) There were no vacancies to be filled; (2) he was a stranger and unknown; (3) it was considered a waste of time to try to teach speech to a deaf child. Moreover, the officials of a number of institutions were finding it difficult to satisfactorily answer the questions parents were asking about the success attending the efforts of a Miss Rogers, who was reported to be teaching deaf-born children to speak and to read speech, without the use of signs; an heretical spinster over in Massachusetts, who had actually had the audacity to undo the work of the Creator, by teaching deaf-born children to talk! Why should parents want their dumb children to talk? If an all-wise and beneficent Father had intended that His children should talk, He would not have stricken them with "dumbness," was the belief that prevailed in many institutions in those days; a belief that appeared quite plausible to parents whose children were taught by means of a sign-language in which gestures displaced good and bad English. In other words, nearly all of the instructors of the deaf were sign-teachers, who believed that it was a lamentable waste of time and effort to attempt to teach speech and speech-reading to the "dumb," as children afflicted with deafness were then classed.

In 1869, Professor Bell brought out a form of Visible Speech for use in longhand writing, and then a stenographic form for shorthand reporting in all languages. The first system was called "uni-

versal line-writing" and the second, "steno-phonography." Then he adapted the two into a form of phonetic line-writing serviceable to the deaf and identical with Visible Speech. In this improved shorthand form of Visible Speech, the vowels are subordinated while the consonants stand out prominently, or the reverse of the printed form of Visible Speech. Again, "the stenographic characters of Visible Speech have been taken and slightly modified so as to form distinct characters, and to make them still more distinct they are written separately instead of being united together as in shorthand. The result is that the word makes a very compact picture to the eye of a deaf child." Graham Bell has said:

"Speech depends for its intelligibility upon the consonants; the vowels are liable to great variations in the mouths of individual speakers. Thus it is that pupils understand very readily the pronunciation of their teachers and friends, whereas they experience difficulty in understanding strangers. This is largely due to too great reliance upon vowels. These are clear to the eye, but they vary in the mouths of different speakers. Now, we get in line-writing a comparatively clear picture of what the pupil sees in the mouth of a speaker. In reading this line-writing the pupil goes through a useful mental exercise, for in the same way as the consonants are ambiguous to the eye when the pupil reads from the mouth, they are to a certain extent ambiguous in line-writing. In printed line-writing they are perfectly clear, but in pencil writing you cannot distinguish very well between a thick line and a thin line; the thick line means voice and the thin line means no voice. The general shape of the characters shows the part of the mouth that is used, but the absence or presence of voice is indicated simply by the different thickness of the line. The absence or presence of voice the pupil cannot see in reading from the lips, he cannot see the distinction between p and b. So when a pupil writes this line-writing in pencil you get a writing that presents to the eye the very same ambiguity that the mouth presents, and there is a mental exercise of the same character as the mental exercise when you read from the mouth. The pupils learn to group words that have the same general outline, that is to say homophenous words, words having the same appearance to the eye when they are spoken. So this method of line-writing has the advantage of giving the child what he sees in the mouth when he tries to understand a speaker; but if it is on paper permanently he can study it out. . . . There is this advantage in the line-writing over speech-reading. When you speak by word of mouth the positions vary successively, and the pupil has to rely on his memory, in order to accumulate a sufficient

number of words to enable him to decide by the context what the meaning of the sentence is; but in line-writing he gets the sentence as a whole, at once."

How this system of Visible Speech came to be adopted in the Boston School, the personality of the instructor, the part it played in moderating the bitterness then existing between the many sign and the two oral schools, and, finally, how Miss Fuller's repeated requests that instruction be given in Visible Speech indirectly led to the invention of the telephone in Massachusetts in place of in Canada, or in England, must here be briefly touched upon to clearly portray the long and wearisome trail over which oral teaching of the deaf had to travel to its goal.

And this presentation will show how thoroughly grounded Graham Bell was in the very knowledge so essential to a comprehension of all the factors involved in the problem of the electrical transmission of speech, a preparation so thorough and complete that, in 1876, it was generally admitted he was the only man in the world made competent by education and practical observation to solve that complex problem.

Alexander Graham Bell, the inventor of the electric-speaking telephone and the instructor of the principle and theory of Visible Speech to the teachers of Boston's school for deaf children, was born at No. 13 Hope street, in the corner house overlooking Charlotte Square, Edinburgh, Scotland, on March 3, 1847, a birthday of his grandfather, Alexander Bell, and only two days following a birthday of his father. His mother, Eliza Grace Bell, was a native of Hampshire, England, and the only daughter of Surgeon Samuel Symonds, of the Royal Navy. Nature moulded her in dainty, petite form, and endowed her with rich intellectual and artistic gifts. She was a natural yet exceptionally well-trained musician, a lover of the beautiful in nature, who found a joy in transferring picturesque scenes and impressions that awoke responsive chords in a gentle, joyous nature. Mrs. Bell's earthly life ended on Tuesday, January 5, 1897, at the age of eighty-seven, and her remains rest in Rock Creek Cemetery, Washington, D. C. Intimate friends speak of her as "a typical gentlewoman," a most lovable character, "a rare combination of sweetness, tenderness, and strength."

As his grandfather, his uncle, and his father had won high honors in educational circles and were the accepted authorities in their profession in London, Edinburgh, and Dublin, and as his accomplished mother found a joy in teaching him, it was only natural that Graham should receive many educational advantages. In

his youth his parents resided at No. 13 South Charlotte street, Edinburgh, and his elementary education was conducted at home until his tenth year, when he entered McLaren's Academy. There he remained a year, and then entered the Royal High School, taking the regulation course and graduating at the age of fourteen. Then he went to London and remained for a time with his grandfather, the eminent elocutionist, who was very fond of the boy.

Following his birth the lad had been christened Alexander after this grandfather, on the anniversary of whose birth he was born. But as his father had also been christened Alexander, the boy preferred to be called by some other name. While endeavoring to select a suitable one, his father received a visit from an old friend, Alexander Graham, of Cuba. The name Graham captured his fancy, and in the boy's own words: "I decided to adopt it. When my birthday arrived, wine was placed upon the dinner table, and my father asked us all to fill our glasses, as he had a toast to propose. He made a little speech about my past and my future, and wound up by proposing the health of Alexander Graham Bell. My use of the name Graham dates from the third day of March, 1858, at which time I was eleven years old."

Returning to Scotland, Graham Bell, as we shall hereafter designate him, entered Mr. Skinner's Weston House Academy, in Elgin, Scotland, where he spent a year as pupil-teacher on a salary of $50 a year and board. The next year his elder brother, Melville, relieved him, and Graham returned home and matriculated at the University of Edinburgh, where he attended lectures on Latin under Dr. Sellers, and Greek under Professor Blackie. Qualifying as a tutor, he returned to Mr. Skinner's Academy as teacher of elocution and music on a salary of $350 per annum and board, though not nineteen years of age. And here it was that he told his friend that "Some day we shall talk by telegraph." The following year he taught in the Somersetshire College, in Bath, England, and there had a telegraph line connecting his room with that of a friend for experimental purposes. Meanwhile he was preparing to enter the London University.

The careful training received from his mother served Graham Bell admirably, for not only had he inherited her exceptional musical talent and been intelligently guided by her artistic mind, but he had also received personal instruction in music from Signor Auguste Benoit Bertini, who soon taught his young pupil to read at sight the most difficult passages. In fact, Graham Bell proved so apt a pupil and became so fascinated with the practice of music that for a time all other studies were neglected.

(*To be continued.*)

THE AMERICAN INSTITUTIONS FOR THE EDUCATION OF THE DEAF.[1]

G. FERRERI, ROME, ITALY.

CHAPTER XIV.

HELEN KELLER.

In the month of May, 1902, being in Cambridge (Mass.), the present home of Helen Keller, I sent an article to Italy, giving my impressions of my first meeting with her, which was published in the Naples Review.

I am well aware that a few fruits selected from an Agricultural Exhibition might give an entirely false impression in regard to the usual productions of a garden, and therefore I, who prefer to study the average case rather than those of abnormal Pedagogy and Psychology, should not have chosen to return to this subject in these Notes, if this special case, a truly marvelous one, of the intellectual development of this girl "in spite of her deficiencies," as she herself put it, did not bring a useful contribution to the experimental study of emendative pedagogy, proving effectually, as it does, that the celebrated axiom of sensual philosophy to which moderns give the value of an unalterable law: "that nothing can pass into the mind unless first perceived by the senses," is not always true.

An accurate examination of Helen Keller's case seems to me to lead to this opposite conclusion: "allowing that the pathological symptoms of the organs do not indicate serious alterations of the brain, the intelligence may be developed in spite of the deficiency of the senses." This is based upon the fact that there is no other source of sensation and perception so closely connected with the intellect as language.

It has long been demonstrated that when the natural stimuli to speech fail to act, other means of representing language and translating its images into spoken or written words can be communicated to, and employed by, a person deficient as regards his

[1] Translated from the Italian for THE ASSOCIATION REVIEW, by the author. Begun in the June, 1904, number.

senses, but intelligent because possessed of a sound and regularly developed brain; this therefore needs no further discussion.

We may therefore affirm that intelligence is (in reality) consciousness of life. "It is indeed the first simple and uncertain manifestations of psychical life which step by step, by means of the progressive assimilations of the energies of nature, rise to the highest heights of nature herself attaining the form of thought and consciousness."

This is exactly Helen Keller's case. She had the good fortune to develop from earliest infancy in a marvelous, but at the same time a natural manner, the psychical energy, which had not been injured in the catastrophe which deprived her at one fell swoop of the two psychologically most important senses, and she was thus enabled gradually to acquire a knowledge of the form and substance of the English language.

By means of this knowledge, rendered still more efficacious by her great and varied experience, she has been able to speak of herself and of the action of her own mind in exactly the same way as if she were a physically normal person.

It was not necessary to exclude from her language all words and sentences relative to sight and hearing, because the means used as substitutes for these senses served without difficulty to open a way of mutual communication between her mind and the outside world. This is affirmed on the testimony of facts, but we must not therefore conclude that the lack of sight and hearing could be advantageous to the intellectual life, because such deprivation tends to concentration of thought. This and similar exaggerations have been too often written and repeated even by persons skilled in the study of psychological phenomena; we have to bear in mind that in this field there still remains much that is obscure and unexplored, that facts have become confused and mixed up with ridiculous suppositions. It would be well if those devoted to emendative pedagogy would begin to distinguish between the two. In the present case we must consider first of all that the great effort that must be made by the Deaf and Blind gifted with intelligence to enable them to discover the facts of existence, far from constituting a compensation for their deficiency, is a real drawback. Popular opinion looks upon the absence of distractions as a benefit; but does not understand that these distractions are a mere nothing in comparison to the hindrance to the development of the intelligence, which arises from

the privation of the senses. The abnormal is and remains abnormal in spite of all instruction and of the highest education.

To return to Helen Keller, I had thought that the best way to give a clear idea of the phenomenon to my Italian colleagues, would be to translate for them the "Story" which she herself has written of the process of her education. But my efforts to add an Italian translation to those which will be published in French and German have been in vain.

Therefore, and also in order not to alter the designs of these Notes, I will limit myself to what I personally was able to ascertain from the intercourse and conversations I had with Miss Keller during my sojourn in America.

At my first interview with Helen (in Washington), our conversation turned immediately upon the difference in pronunciation of Greek and Latin in the modern schools. In the debate I expressed my opinion, and Helen hers. We were not agreed as to general principles, but coming to particulars our agreement could not have been more complete nor more fruitful of study and experience. With Miss Sullivan's assistance, as at that time I could not use the one-handed alphabet, I explained to Helen the phonetic value which the Latin alphabet has for us Italians, and I suggested to her certain rules which occurred to me at the moment as to the derivation of substantives and adjectives in our Italian language. The girl, who knows by heart a good vocabulary of Latin words, at once translated for me into Italian quite a number of nouns and adjectives, pronouncing the words clearly. It was then arranged that she should learn Italian, and that I should be her teacher. Thus it came about that during the two months of July and August (1902), I had the pleasure and satisfaction of conversing every day with Helen Keller, and of giving her instruction in the Italian language. I quickly acquired the one-handed alphabet, and by means of it and of lessons prepared in Braille characters, it was easy for me to communicate with Helen, while she answered me by speaking aloud. Our conversations in Italian soon became very rapid and fluent, and as the girl has, as is well known, a mind of superior culture, we were able to devote the lessons to the study of Dante's "Divina Comedia."

To indicate, and also to correct her pronunciation, I again made use of the usual expedients of the Oral method, referring also to the analogy between the sounds in English, German, and French languages. Of this last, however, she does not make

much use, but she speaks German well, and has a perfect knowledge of English.

It has been observed by many that she uses the very best English, as also that her style is good and pure. This is due to two circumstances which should be noted. In teaching Helen, Miss Sullivan had always aimed at using good language, calling the attention of her pupil to the elegance and appropriateness of certain words and phrases. Afterwards in the lessons given by other teachers, as at Radcliffe College, Miss Sullivan did not repeat into Helen's hand all that the professors said, for they often wandered off into useless disquisitions; but she told her in good and simple language only what was necessary. Thus Helen could arrange in her mind the lessons received better even than the other students who are obliged to take notes and to ask from time to time an explanation of the subject treated.

It is easy to understand that by this method Helen has learned from childhood to seek the best and most suitable language for expressing her thoughts. The acquisition of this gift has certainly been aided by her natural character and her gifted, thoughtful mind. There is another circumstance to be noted, which as far as I know has not been observed by others who have written about Helen Keller. Indeed, the serious mistake has been made to try to establish a comparison of similarity between Helen Keller and Laura Bridgman. This error is a serious one, because, granted that there may be a real analogy in their physical condition, the difference in the special aptitude of their minds is enormous. Laura Bridgman had an inquisitive mind. She was always asking questions about everything and everybody with a tiresome insistence, but her questions seldoms soared above the minute details of material existence, those details which afford satisfaction to narrow minds. A person who knew her during the last years of her life, assured me that education and environment had not succeeded in liberating her from that sordidness of thought and childish inquisitiveness which are peculiar to the lower classes of her country.

Helen is entirely different. She does not ask many questions; indeed, when she knows there is some one else to do the honors of the house, she prefers to remain apart, replying, however, with the greatest affability whenever she is spoken to. Helen is very reserved in manner, and does not seem able to interest herself in the small matters about her. Her questions, even

in intimate intercourse with her teacher, are never commonplace, and are always with the object of obtaining better knowledge, but never from idle curiosity.

Her knowledge of general literature enables her also to adorn her conversation with allusions, remembrances, and quotations with a facility and thoughtfulness that rarely grace that of intellectual persons. It is evident that Helen ponders much upon what she has read and learned, that she formulates by her own judgment those inductions and deductions which, while they strengthen her powers of sound reasoning, insure to her an increase of knowledge from every bit of information she receives through reading or conversation.

Dr. MacFarland, who studied Helen's case before 1894, that is, when the girl was 13 or 14 years of age, lays much importance upon the fact that her deafness and blindness were not congenital. And he demonstrates in a rather conjectural way that Helen owes to the first 19 months of her existence the intellectual capacity for conceiving the ideas of sound and color. He says that in these first months of her life, the child must have received such impressions as could be easily recalled later on when she had learned language by artificial means. This I can understand up to a certain point, but even taking into account the state of subconsciousness which exists in the mind of a child up to the age of 2½ years, yet one cannot speak of anticipations except in exceptional cases of precocity. Now this does not seem to me the case with Helen Keller. She speaks of color and sound, not as if it were her own conception or idea, but rather as we might speak, for instance, of the accents of the Chinese language, that is from hearsay. Finding her one day on the balcony exposed to the sun, I asked her if she knew that the sun was shining on her. "Yes," she replied, "for I feel its warmth." "As to light," she added, "I have a dim idea of it, as if I had seen it long ago in a dream." From this and similar experiences, I think I may conclude that Miss Keller has not real perception of either color or sound; but speaks of them only from the assimilation of words and phrases. Her constant intercourse with those about her gives her opportunity of becoming acquainted with all the circumstances of her surroundings, and thus she gives herself and others the impression not only that she knows what happens about her, but also in speaking that she really sees the special features of the landscape, of nature, or of art. I am quite convinced that she talks of all

this, not from present specific consciousness and perception, which would be impossible as to aural and visual images; but that neither does she do so from the confused recollection of sensations received during the first 19 months of her infancy. Helen Keller owes the development of her intelligence entirely to the language she was able to learn very early, for Miss Sullivan began her education when the child was hardly seven years old. Now if we reflect that Miss Keller has put into action all her psychic powers of intelligence, memory, judgment, comparison, analogy, and inference, almost in the same way as is done by a normal person, that is, by means of the wise guidance of the maternal method of language teaching, and that this course of instruction was uninterrupted for more than 15 years, it need not surprise us that she should use the language of normal persons in speaking, for example, of seeing and hearing all that others make known to her.

The same may be said, I think, of Miss Keller's imaginative style; of her way of dreaming; of the interest she takes in theatrical representations and exhibitions of art; but I hold that as regards Pedagogy and Psychology, much importance should not be given to the aural and visual images which occur in the history of her life.

In addition to what has been stated, it is to be remarked that in the comparative study of ancient and modern languages, Miss Keller was obliged to learn the expressions of various authors in describing the phenomena of nature. This may have produced in her mind that common phenomenon, not much observed by students, which gives the force of a specific sensation to the repetition of, or to the comparison with, things described by others in another language or in another manner. This without taking into account the self-suggestion which makes a man persuade himself that he knows well, something of which he has only the idea, conceived and substantiated by means of repetition.

That which cannot be disputed in Helen Keller is her mental culture and her reasoning power. Of this I had many proofs while conversing with her without the aid of any interpreter. Generally she herself would suggest the subject of conversation, pausing to consider some event mentioned, or asking my opinion on various questions which came up in the lessons.

I will copy from my notebook the subjects of some of our conversations, which I was careful to note down during the first

days of our intercourse. These brief notes, I think, will serve to give an idea of Helen's capacity for fixing her attention and reasoning powers on the most varied subjects:

1. The social question; the conflict between capital and labor (at that time the coal miners were on strike, and the notice was taken from a newspaper).

2. The temporal power of the Pope.

3. The necessity of a strong navy for Italy, on account of her geographical position on the seas.

4. Liberty of conscience in the United States (foundation of the city of Providence, in the State of Rhode Island).

5. Various questions in regard to Dante.

6. Comparison between Milton and Dante as to their points of similarity.

7. On the necessity of teaching the Braille system to the adult Blind, and of the establishment of a large circulating library for the Blind.

8. The ideal woman in the family and in society.

9. The cause of the decline of the Roman Empire.

10. On the thought of eternity.

11. The necessity of judging human action from wide points of view, as it is impossible to understand the internal and external conditions of the actor.

12. On suicide. Discussion of the Catholic doctrine on this subject.

13. The most favorable conditions for physical culture.

14. The attractions of home.

15. Of English, German, and French literature.

16. On scholastic legislation for deaf-mutes.

17. The political importance of Italy.

18. The European immigration to the United States.

19. The relation between the Catholic Church and the French Republic.

20. The contemplative life.

21. Abnegation and sacrifice for the love and assistance of our neighbor.

22. The atomic theory.

I did not take notes of other subjects discussed; but from the preceding list we may rightly argue that Helen Keller is able to converse on many and varied matters.

It may be asked how can she speak on so many and varied subjects.

The answer is very simple. When conversing with Helen Keller one almost forgets that she is deaf and blind, because the clearness of her ideas and the natural way in which she expresses her opinions are such as to make the hearer concentrate all his attention on the subject of which she speaks.

In conversation she becomes animated when speaking of matters she is fully conversant with, but she is concentrated in thought when she does not find in the answers of her companion that clearness of thought that she looked for. She is indignant with a noble resentment whenever social, political, and historical facts are stated which impede the progress of humanity, but she rejoices visibly and her face lights up with intelligence and comprehension, whenever the conversation turns upon a subject which recalls noble and generous deeds.

She has a just criterion of the various conceptions of life, from the point of view of the various traditions and religious beliefs. As regards the latter, as Helen has friends professing the Catholic faith, she seemed to me much interested in obtaining information about the Catholic doctrine. Once, indeed, she expressed her regret that many disdained speaking of the matter, for, as she observed to me one day, it is impossible to understand literature and art without knowing the principles of the Catholic religion, and she gave me illustrations of the fact by alluding to various works of art and literature. I cannot, however, give the reader an example as I did not take notes on this subject. I remember only that one day she asked me to re-read the last Act of Schiller's "Mary Stuart," so as to explain to her whether the literary criticisms on this drama were correct from the religious point of view.

I have perhaps devoted too much space to this part of Helen Keller's culture because it seems to me a striking proof of the development of her intelligence, and this is a point on which little or nothing has been said by those who have studied Helen Keller with the object of psychological investigation. From a glance at the list of subjects of our conversation, a list, I repeat, which although not complete yet suffices to carry conviction as to Helen's varied culture—we notice one interesting circumstance, that is, that there is nowhere found any allusion made to definite sensations of sight, hearing, or of the other senses. This in my opinion

shows evidently that in the thinking or reasoning process, the senses are excluded in her case, with the exception of touch. But if one observes carefully, this also is not put into action by its specific sensation, but rather as a conveyance for the alphabetical symbols which transform themselves into symbols of thought and consciousness.

I will say more: when Helen refers to the sense of touch and smell, she shows that she has an exaggerated idea as to the specific sensation of these senses. Her observations in this field leave the ordinary, and sometimes the rational. As to the sense of hearing, she has an exaggerated idea as to the effect of sound in speaking or laughing, so much so that often when she laughs she puts her hand instinctively over her mouth, as if to smother the sound. In this she shows a peculiarity common to the Deaf-Blind, who seem to believe they make a great noise in walking, or in moving objects about them. Considering these facts, I cannot understand how people can seriously speak of the musical sense which Helen is supposed to possess.

An occurrence which took place one day in a church where Helen had been taken by her teacher, created a great impression. She manifested her pleasure and surprise in hearing the fine music performed there. The newspapers, with their usual ignorance of the real facts, published the marvelous proof of a musical sense in the deaf girl.

The real facts of the case, however, were these: Helen had received from her teacher the most particular information about the appearance of the church, the eloquence of the preacher, and about the beautiful vocal and instrumental music. Placed thus in the physical-psychic environment (if we may use such a term), Helen concentrated her whole attention on the sense which is distributed throughout the entire body, the sense of touch, and she was conscious of the vibrations of sound which, as is well known, any deaf person can feel under certain conditions, not only by putting his hands on the surface of the instrument, but also throughout his whole body, as it has been demonstrated that the bony structure is a good conductor of the vibration of the air. Now, adding to this Helen's great imaginative power, it is easy to account for the evident pleasing effect called forth by a simple suggestion. I could prove my explanation of this fact by many arguments, but these would lead me beyond the limits assigned to this study. I will only say, that had there really been an awak-

ening of a musical sense, Helen Keller would have insisted on repeating the experiment and would not have limited herself to enjoying the sweet music only once. Such limitations and acquiescence are in contradiction with the nature, talents, and education of Miss Keller.

Hence, I believe in regard to certain assertions—which have been repeated in sensational language by the newspapers and spread abroad, giving the strangest and most impossible accounts of Miss Keller—that these apparent powers are nothing else than the effect of suggestion. In this opinion, however, Professor Jastrow (whom I had the pleasure of meeting at Miss Keller's) does not agree with me.[1] He does not give any value to suggestion except in the case of the Deficient. Now in speaking of Helen Keller, to use such a term appears inappropriate, although it seems to me we must not forget that she is deficient as regards the senses she does not possess. Therefore, leaving out of the question the fact that, in the last analysis, all education is based upon a process of suggestion, we must remember that the blind-deaf succeed, by means of the substitution of artificial stimuli, in forming an approximate idea of the specific sensations of the organs they do not possess at all or imperfectly; but since this idea is only approximate, it is therefore defective. I will give an instance which seems to me to prove my point.

They tell us that Laura Bridgman had a great aversion to the color red. From this statement many concluded that the blind could distinguish color by touch. This inference (accepted, we cannot understand how, even by writers of a certain authority) is utterly ridiculous. If we only reflect that the blind cannot have the specific sensation of color, much less recognize it by touch, for any chromatic sensation escapes the sense of touch as respects its being chromatic. We may affirm instead that the blind-deaf can distinguish slight differences in texture or material, and by associating these sensations with those suggested to them of the color of the objects, they may, in using this or that

[1] Dr. Joseph Jastrow, Professor of Psychology in the University of Wisconsin, is one of Helen Keller's intellectual friends. He has spoken of her in his writings, having had the opportunity of studying her under many different aspects. See in regard to the dreams of the blind and deaf-blind, his book: "Fact and Fable in Psychology," London, Macmillan & Co., 1901; where will be found also an original article by Helen Keller on her manner of dreaming. (See also the article "Helen Keller: Psychological Autobiography," by Prof. Joseph Jastrow in the Popular Science Monthly, May, 1903).

object, recall the color of the object. Indeed, in the case of Laura Bridgman just mentioned, we should remember that her aversion to the color red was early accounted for by the circumstance that the first time she was told of this color she felt a disagreeable sensation when touching the red object. Her repugnance to this color is due to this, and is easily understood when we consider that, at least at the beginning of her education, her mental activity was limited to the most insignificant details.

There still remains for discussion the compensation which superficial observers claim as an existing fact in the education of the senses of the Deaf and Blind. I do not believe, however, that such compensation ever exists in respect to a greater sensibility of the senses that remain. The education of one sense to act in some degree as a substitute for another which is lacking or is imperfect, cannot produce the true sensation, but only an adaptation and the recognition of a given series of signs.

When Henen Keller has shaken hands with a person, she can recognize that person afterwards among many others, even after the lapse of years. In the same way she can read words from the lips by placing her fingers on the mouth and throat of the speaker. She also knits well, and writes with ease on the typewriter. And yet we cannot say that she possesses an extraordinarily delicate sense of touch. In many cases it is really the muscular sense which makes her capable of performing certain actions. In reading raised print she is rather slow, and has not the confidence shown by other blind persons. The same may be said of her sense of direction, in which Helen is quite deficient, perhaps because she has been too much assisted, if we may speak of excess in the care taken of such unfortunate beings.

It would be suitable to say something here in regard to Miss Sullivan, to whom Helen owes her intellectual life and her education. But others far more competent than I, have written of her gifts of mind and heart. I will only add that, if Miss Keller owes her intellectual life and high culture to the continuous loving assistance of her teacher, she also owes to the beauty of Miss Sullivan's character the most precious results of her education.

Miss Sullivan has transfused into her pupil a cheerful manner, presence of mind in every circumstance, frankness in expressing an independence in holding her own opinions. Perhaps these qualities have given a bias to Miss Keller's mind that makes her somewhat over-indulgent in her estimate of human affairs,

but everyone will agree that a little optimism will not hurt a person who must for life rely upon the guidance and support of others. Indeed, I think it really crowns the noble work of restoration, that it is so difficult to distinguish what part the teacher had, and what should be referred to the pupil's own adaptiveness to her teacher's method.

In order to combat a prejudice widely diffused, even in America, I cannot do otherwise than add another observation.

Many believe that the result of Helen's instruction consists alone in the translation and repetition of the thoughts and knowledge of Miss Sullivan. Such is not the case, and I could prove the contrary by many arguments, but I will limit myself to one only, that of my own personal experience.

Helen has learned Italian fairly well with the instruction I have given her without any assistance, and generally in the absence of Miss Sullivan. Many other teachers of other branches of study could bear the same testimony, who were in the habit of conversing and discussing with Helen while Miss Sullivan (who is an excellent housekeeper) attended to household matters.

Besides, it is an established fact that Helen reads, writes, and studies or prepares her lessons without Miss Sullivan paying any attention to her.

In conclusion, it may be said, therefore, that while Miss Sullivan was an excellent teacher for Helen in the first years of her education, she has now become simply her interpreter in her course of higher study, and in her relations with the outside world.

SPECIAL REPORT UPON THE DEAF, BASED ON THE RETURNS OF THE TWELFTH CENSUS.[1]

PREPARED BY ALEXANDER GRAHAM BELL, AS EXPERT SPECIAL AGENT OF THE CENSUS OFFICE.

(*Continued from page 444.*)

Causes of deafness.—In the Twelfth Census 89,287 persons were returned as deaf, and in 10,115 cases the causes of deafness were unknown (Table 5).[2] In the remaining 79,172 cases the supposed causes were specified.

In many cases, however, the assigned causes are vague and unsatisfactory. For example, "military service, 3,242 cases; sickness, 2,143; fever, 1,436; medicine, 205; headache, 136; hard work, 101; diarrhea and cholera infantum, 90;" etc.

To these may be added the following as examples of the curious and fanciful causes of deafness sometimes assigned in individual cases: "Caused by milk of diseased cow; chewing paper and speaking loud in my ear; bitten by a rat; holding nose and mouth shut and blowing until head would buzz; driving Government teams on the plains; eating caustic potash; going with hay shockers; ran a piece of shingle down throat; worms; worry;" etc. No less than 1,514 cases of this character were reported. (See footnotes to Table XXXVIII.) Such causes as these—even if they are connected with the production of the deafness, which is often doubtful—are very remote causes indeed.

We may smile at the idea of driving Government teams on the plains as a cause of deafness; but we can readily trace a remote connection between the supposed cause and the effect. The driver speeding the Government teams across the plains was exposed to the weather and may have taken cold, resulting in catarrh of the middle ear, which may ultimately have caused his deafness.

It seems more satisfactory to say that deafness was caused by some specific disease—say scarlet fever, for instance—than by driv-

[1] A reprint of "Special Reports: the Blind and the Deaf," in the part relating to the Deaf; issued by the Department of Commerce and Labor, Bureau of the Census, Washington, 1906. Commenced in the October, 1906, number of the REVIEW.

[2] Omitted from this republication.

ing Government teams, yet really the one is no more a cause of deafness than the other. Both act indirectly by producing effects that become causes for other effects; and they differ simply in the degree of their remoteness from the ultimate effect produced—deafness. It is a matter for serious consideration that all the assigned causes of deafness, even the most plausible, are of this same indirect character, and are not in themselves true causes of deafness at all. It will readily be recognized that military service is not in itself a cause of deafness; for out of the vast number of persons who have been engaged in military service only a very small fraction are deaf. All of the other causes, however, fall into the same category; for out of the millions of people who have had scarlet fever, for example, a very small fraction indeed were deaf. Like driving Government teams on the plains, the specific diseases usually assigned may indirectly be causes of deafness, but are not so of themselves alone.

The concussion of the air due to the discharge of heavy artillery may rupture the membrane of the ear of one near at hand, and the internal ear may be so affected by the shock as to have its usefulness impaired; but in this case the true cause of the deafness is the injury to the ear, and not directly the concussion of the air, far less the cannon that produced it, or the still more remote cause—military service.

Military service may be the cause of a person being present when a cannon is fired; the firing of the cannon may be the cause of a concussion of the air; the concussion of the air may be the cause of an injury to the person's ear; and the injury to the ear may be a cause of deafness. After the manner of "The House that Jack Built," the cause of deafness may be made anything you choose, if you only carry back the chain of causation far enough. Scarlet fever and other diseases, usually accepted as legitimate causes of deafness, belong to this same class, for they only act indirectly through intermediate agencies. Scarlet fever, for example, differs from military service simply in the fact that in the chain of causation it is nearer the ultimate effect produced.

Scarlet fever may be the proximate cause of an abscess in the middle ear; the suppurative process in the middle ear may cause serious injury and even total destruction of necessary parts of the delicate machinery of the ear; and the injury to the ear may thus cause deafness. There are many other diseases, however, that produce a similar injury to the ear and in a similar manner. For example, measles, influenza, diphtheria, pneumonia, erysipelas, small-

pox, tonsilitis, bronchitis, etc. In the present report, therefore, all these diseases are grouped together and the deafness is attributed to "a suppurative affection of the middle ear."

The principle has been adopted of classifying the assigned causes by their effect upon the ear, grouping together in one class all those diseases or proximate causes that produce the same effect upon the ear. Accordingly causes of deafness are divided into three broad groups, as follows: Affections of the external ear, affections of the middle ear, affections of the internal ear.

Each group is divided into subgroups, as follows: External ear—impacted cerumen (earwax), foreign bodies in ear, miscellaneous (external ear). Middle ear—suppurative affections (inflammation and abscess), non-suppurative (or catarrhal) affections, miscellaneous (middle ear). Internal ear—affections of labyrinth, affections of auditory nerve, affections of brain center for hearing, miscellaneous (internal ear). Table XXXVII shows the number of the deaf, by the classes specified:

TABLE XXXVII.—*The deaf, by causes of deafness.*

CAUSE OF DEAFNESS.	Total.
All causes	89,287
Classified	47,967
Unclassified	31,205
Unknown	10,115
Classified:	
Affections of external ear	871
Affections of middle ear	34,801
Affections of internal ear	12,295
External ear:	
Impacted cerumen	357
Foreign bodies in ear	297
Miscellaneous (external ear)	217
Middle ear:	
Suppurative affections	17,533
Nonsuppurative, or catarrhal, affections	17,260
Miscellaneous (middle ear)	8
Internal ear:	
Affections of labyrinth	2,726
Affections of auditory nerve	9,361
Affections of brain center for hearing	129
Miscellaneous (internal ear)	79

Out of 89,287 deaf, the causes of deafness have been classified in 47,967 cases, or a majority of the whole; 31,205 cases remain unclassified; and in 10,115 cases the causes are unknown.

Broad groups.—Among the classified cases, affections of the middle ear are the predominating causes. Comparatively few lost hearing from affections of the external ear. The percentage of cases in each class is as follows: External ear, 1.8 per cent.; middle ear, 72.6 per cent.; internal ear, 25.6 per cent.—total classified, 100 per cent.

Subgroups.—The principal subgroups seem to be four in number; these, with the percentage of cases included in each, are shown as follows: Middle ear—suppurative affections, 36.5 per cent.; nonsuppurative (or catarrhal), 36 per cent. Internal ear—affections of labyrinth, 5.7 per cent.; affections of nerve, 19.5 per cent. Other subgroups, 2.3 per cent. Aggregate classified, 100 per cent.

Table XXXVIII shows the classification of causes of deafness adopted, with the subdivision into broad groups and subgroups, and the number of cases compiled under each assigned cause.

FOOTNOTES TO TABLE XXXVIII.

[1] *Other (external ear).*—Includes bathing and vaccination; cold and dust getting in ear; corrugated growth on ear passages; ears filled up; ears pulled; exostosis; filling up of eardrums; flesh growing out of right ear; formation on inside of ear; growth about ears; hardening of wax and snuff; old age, and ears grown together; salt rheum and throat trouble; salt rheum or tetter; skin disease; substance growing on drum; too frequent syringing.

[2] *Other (suppurative affections of middle ear).*—Includes boil behind ear; broken eardrums; corrosion mastoid bone; defective eardrums; disease of bone; disease of mastoid bone; drum of ear gone; eardrum of right ear gone, left one closed; ear trumpets are gone; perforated eardrum; perforated eardrums, inherited; pleurisy; sore eyes (doctor kept blister back of ears for three weeks); ulceration of membrane.

[3] *Other (nonsuppurative affections of middle ear).*—Includes adenoid growth; adenoid of posterior nerve; air in ear; air on the head; air tubes closed; asthma; asthma and coughing; asthma and nervousness; asthma and old age; bent eardrum; bronchial affection; bronchial and catarrhal trouble; bronchial trouble; buzzing noises in head; chronic catarrh; chronic rheumatic pharyngitis; chronic laryngitis; chronic nonsuppurative inflammation; closing of tube; collapse of Eustachian tube; concavity of tympanum; congestion; congestion of the eardrum; contraction of eardrums; drum of ear closed; drum of ear down; drum of ear not straight; drums became inactive; dry ears; drying up of earwax; eardrums affected; eardrums grown fast to something; ears being too dry, drums closed up; ears too dry; enlargement beyond drum of ear; enlargement of drum; enlargement of ear glands; enlargement of glands; Eustachian tube closed; falling of eardrum; growth in head pressing on tube leading to ear; growth in throat; growth on third tonsil in throat; hard study, dry ear and ringing in ear; hardening of membrane of middle ear; hardening of the glands from throat to ear; head and throat trouble; head disease; head noises; head trouble; high altitude of Wyoming; holding nose and mouth shut and blowing until head would buzz; noise in head; obstruc-

TABLE XXXVIII.—*Number of Cases of Deafness, by Causes.*

[The detailed causes of deafness reported and classified as "other" causes belonging to the subgroups specified in this table are given in the footnotes hereto.]

CAUSE OF DEAFNESS.				Number of cases.
Broad groups.		Subgroups.	Assigned causes.	
Classified	External ear	Impacted cerumen	Water in ear, swimming, diving, bathing	290
			Wax in ear	67
		Foreign bodies in ear	Foreign bodies in ear	297
		Miscellaneous	Cancer and tumor	82
			Burns and scalds	57
			Eczema	51
			Other (external ear)[1]	27
	Middle ear	Suppurative	Scarlet fever	7,424
			Disease of ear	4,210
			Measles	2,469
			Influenza	1,776
			Diphtheria	593
			Pneumonia	308
			Erysipelas	228
			Smallpox	147
			Tonsilitis	139
			Teething	117
			Bronchitis	68
			Consumption	8
			Other (suppurative)[2]	46
		Nonsuppurative	Catarrh	11,702
			Colds	3,074
			Whooping cough	675
			Scrofula	553
			Exposure and cold	446
			Disease of throat	327
			Thickening and hardening of ear-drum	157
			Croup	57
			Other (nonsuppurative)[3]	269
		Miscellaneous	Miscellaneous (middle ear)[4]	8
	Internal ear	Labyrinth	Malarial fever and quinine	1,636
			Noise and concussion	820
			Mumps	243
			Syphilis	27
		Nerve	Meningitis	3,991
			Brain fever	2,013
			Typhoid fever	2,055
			Paralysis	571
			Convulsions	402
			Sunstroke	162
		Brain center	Congestion of brain	93
			Disease of nervous system	74
			Hydrocephalus	88
			Epilepsy	41
		Miscellaneous	Miscellaneous (internal ear)[5]	79
Unclassified			Congenital	14,472
			Old age	3,361
			Military service	3,242
			Falls and blows	2,243
			Sickness	2,143
			Fever	1,436
			Hereditary	909
			Neuralgia	418
			Childbirth	398
			Accident	335
			Medicine	205
			Heat	186
			Rheumatism	167
			Headache	136
			Fright, shock, excitement	119
			Hard work, overwork	101
			Lightning	93
			Diarrhea and cholera infantum	90
			Chickenpox	39
			Operation	27
			Other (unclassified)[6]	1,085
Unknown			Unknown	10,115
Aggregate				89,287

tion of Eustachian tube; obstruction of one ear, palate of her mouth; pharyngitis; pressure of adenoids in pharynx; quinsy; rising on her neck; ringing in head; roaring; roaring in head, and ears stopped up; roaring noise in head; sand bur in throat; stoppage of Eustachian tube; thickening of eardrums and ulcers in throat; thickening of Eustachian tube and paralysis of auditory nerve; thickening of lining of cavity back of eardrums; thickening of mucous membrane of middle ear; thickening of oval membrane; tonsils pressing against eardrum.

'*Miscellaneous* (*middle ear*).—Includes eruptive disease; sore eyes affected drums of ears; trouble with eardrums; wasting of the eardrums.

'*Miscellaneous* (*internal ear*).—Includes acromegaly in skull; affection of nerves of ear; apoplectic fit; atrophy of auditory nerve; attack of the brain; brain affected; brain lesion; brain trouble; blood clot at base of brain; bursting of blood vessel in head; central brain disease; clot on brain; compressed air; compressed air mining machines; defective ear, internal ear; disease of brain; dizziness; gonorrhea and disease of generative organs; growth on the brain; hardening of nerve; hemorrhage of brain; loss of force and vitality in auditory nerve; loss of power, auditory nerve; malformation of inner ear; pressure on nerves of ear; prostration of aural nerve; ruptured blood vessel; rush of blood to brain; rush of blood to the head; softening of brain; stroke of apoplexy; wasting of auditory nerve.

'*Other causes* (*unclassified*).—Abscess around neck and throat; abscess in neck; abscess from a decayed tooth; abscess on breast; abscess on lung; absence of partitions of eardrums; abuse; acute poliomyelitis, anterior; age, and work in factory; anesthesia; anemia and nervous prostration; application on face for toothache; bad blood; bean in nose; bean lodged in windpipe; bee stings; bite of rattlesnake; bitten by a rat; bitten by a snake; black hives; black vomit; bleeding at nose; bleeding of lung; blood disease; blood poisoning; blood rushing to head; blood sickness; blood trouble; boil on chin lanced; boil on head; boil on neck; boils; bowel trouble; breaking down of nervous constitution; breaking out of sores on face; Bright's disease; burning sensation in head; calomel; camp itch and scurvy; canker in mouth and stomach; cankered sore mouth; carbuncle; carbuncle on neck; carbuncle on top of head; careless midwife; carelessness of drug clerk; carrying sack of dirt; caused by milk of diseased cow; change in climate; change of life; change of life, cystic tumor; chewing paper and speaking loud in my ear; chloroform; cholera; cloth in nostril; cocaine injection in rectum; coin lodging in throat; constipation; constitutional; cottonseed in nose; cruelty; damp climate; dampness; deformity; degeneracy; disease of spine; diseased arm; displacement of eardrum; dissipation; dissipation, tobacco; dormant state of drum; drank coal oil; drank hot coffee; drinking castor oil; drinking ice water while being warm; driving Government teams on plains; dropsy; dysentery; dyspepsia; eardrum crushed; eating caustic potash; eating jimson seed; elongation of spinal column; English sickness; ether; excessive navel hemorrhage; feather in throat caused throat to rise; feeble; felon; female trouble; fighting fire; file dust; flux; freezing of head; gas poison; gas used in extracting teeth; gastric fever; gastritis; gathering in neck; general debility; general debility, eardrum dead; giving away of nervous system; going with hay shockers; goiter; gout; growth in right side; growth over inner drum; hardships; having teeth extracted; heart disease; heavy lifting; hemorrhage; hemorrhage, change of life; hemorrhage of throat; hip-joint disease; hot water and working on railroad; hot winds; humor in stomach and head; ice water, when heated; ill treatment; improper care in childhood; infant dropsy; inflammation of bladder and kidneys; inflammation of bowels; inflammation of bowels, and medicine; inflammation of stomach; injection for sore eyes; intense mental strain; dyspeptic trouble; ironing in steam laundry; irregularity of brain; irritation of brain; itch; kidney and bladder trouble; kidney complaint and old age; kidney trouble; kidney trouble and shock to system; lack of blood in nerves; lack of food and water on prairie; large sore under jawbone near ear; laritis; lead mining; lift-

ing too hard; liquor, tobacco, and lost manhood; liver trouble; locomotor ataxia; locomotor ataxia or bronchitis; lodging of grain of coffee in windpipe; loss of blood; loss of amens of one ear; lump on head; lung and heart trouble; lung trouble; lupus; malegita; malpractice; malpractice by physician, destroyed intellect and hearing; marasmus; mean treatment; medical treatment; medicine dropsy; menses stopped; menstruation; mental disease; mental trouble; mercury; mining; morphine; muscles grew around drum; muscular atrophy; muscular nervousness; nearly drowned; neglect; nerve and uterine trouble; nerve trouble; nerves of ear gave away; nervous affection of brain; nervous complications; nervous deafness; nervous debility; nervous female disorders; nervous prostration; nervous weakness, age; nervousness; nervousness and rheumatism; neuralgia, sciatica, quinine, and morphine; noncirculation of blood through head; nosebleed; old age and vertigo; one ear hole larger than the other; organic disease of brain; overdose of turpentine; ovary; ovary and womb trouble; pains; partly inherited and neglect; partly inherited general nervousness; pemphigus; physics; poison; poison ivy eruption; poison shrubbery; poison by eating colored paper; poisonous salve; police service; poor health at critical age, severe treatment; pulling ear until blood ran; put powder up nose; rachitis; ran a piece of shingle down throat; rickets; rickets and acanodros in throat; rickets of head and neck; roots of teeth punched out and false teeth put in, jarred the eardrum down; ruptured blood vessel; salivate for gravel; salivation from calomel; scab milk; scar on drum; sokerosis; seasickness; self-abuse; senile changes; sexual disease; shrinking of muscle of ears; sick wet nurse with ill milk; sickness after vaccination; sickness and gathering on neck; sickness, brain affected; sickness, liver and stomach trouble; sickness of lungs; sickness of stomach; sickness, womb complaint; sleeping outdoors; smoking; sore eyes; sore mouth; sore on left side of head; spider bite; spinal affection, stopping growth of back brain; spinal curvature; spinal trouble; sprain of spine; stiff neck; sting of yellow jacket; stomach and liver trouble; stomach trouble; stomach trouble and constipation; strain of head; strained nerves; straining of a nerve in the back of the neck; strangled with a piece of meat; strangulation of throat; stung by bee; swallowed concentrated lye; swelling on neck; taking gas; tapeworm; teeth grew too far up; term of life, violent coughing; thrash; tickled under arms; tobacco; tobacco smoking and chewing; tooth; toothache; torpid liver; toxemia, diabetes; tracheal difficulty; ulcers, sore mouth; uterine trouble; use of china root tea for worms; use of cocaine for catarrh, atrophy; use of hair restorative; using bandage on head; using calking material; vaccination; vaccination, calomel; varicose veins; vertigo; violent pain; violent storm; vomiting; water brash; weak eardrums; weak nerves; weakness; weakness of aural nerve; weakness of spine; while drunk something broke in head, causing pain; whiskey, and following threshing machine; wind blowing in ear; working at ship calkers' trade; working in cellar; working in dust; working in mine; working in well; working under coal oil lamp; worms; worry; yellow fever; yellow jaundice.

The results given in Table XXXVIII are shown graphically in Diagrams 33 (classified causes) and 34 (unclassified causes).

DIAGRAM 33.

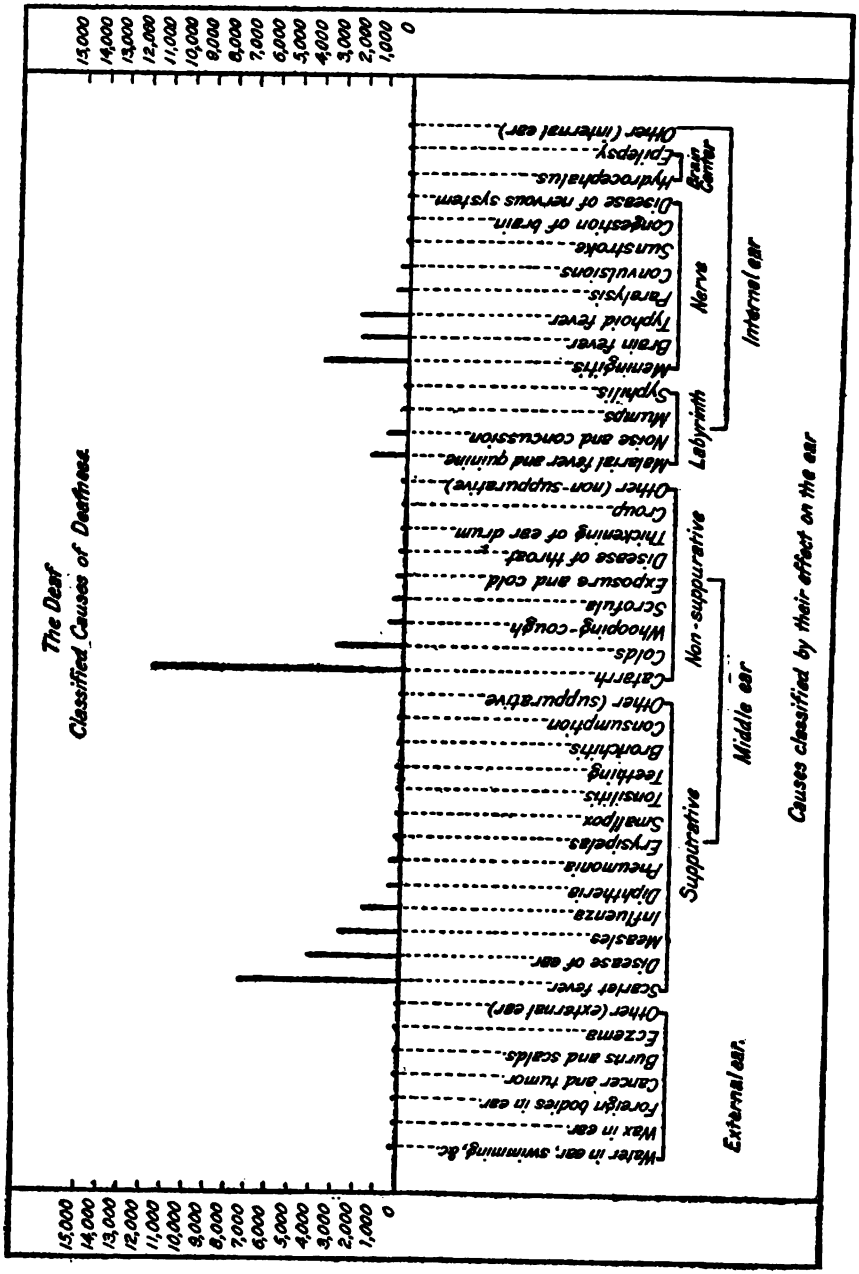
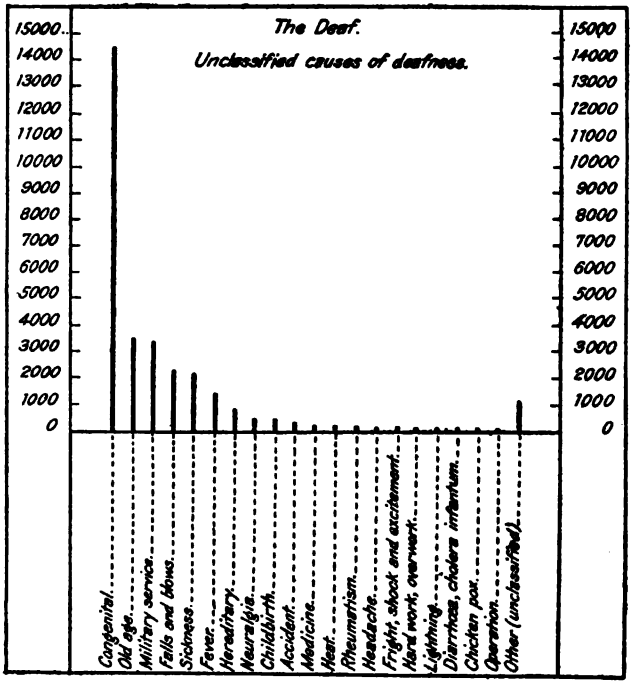

The Deaf
Classified Causes of Deafness.
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Causes classified by their effect on the ear
External ear.
Middle ear
Suppurative
Non-suppurative
Labyrinth
Nerve
Brain Centre
Internal ear
Water in ear, swimming, &c.
Wax in ear.
Foreign bodies in ear.
Cancer and tumor.
Burns and scalds.
Eczema.
Other (external ear).
Scarlet fever.
Disease of ear.
Measles.
Influenza.
Diphtheria.
Pneumonia.
Erysipelas.
Smallpox.
Tonsilitis.
Teething.
Bronchitis.
Consumption.
Other (suppurative.
Catarrh.
Colds.
Whooping-cough.
Scrofula.
Exposure and cold.
Disease of throat.
Thickening of ear drum.
Croup.
Other (non-suppurative).
Malarial fever and quinine.
Noise and concussion.
Mumps.
Syphilis.
Meningitis.
Brain fever.
Typhoid fever.
Paralysis.
Convulsions.
Sunstroke.
Congestion of brain.
Disease of nervous system.
Hydrocephalus.
Epilepsy.
Other (internal ear).

DIAGRAM 34.



From Table XXXVIII and Diagram 33 it appears that among the classified cases the principal assigned causes are:

Scarlet fever	7,424	
Disease of ear	4,210	
Measles	2,469	
Influenza	1,776	
Catarrh	11,702	
Colds	3,074	
Malarial fever and quinine	1,636	
Meningitis	3,991	
Brain fever	2,013	
Typhoid fever	2,055	
		40,350
Minor causes		7,617
Aggregate classified		47,967

Malarial fever is given as a cause of deafness in some cases, and quinine in others. In large doses quinine is known to affect the hearing; but it is doubtful whether malarial fever, without quinine, produces deafness. As it is probable that all of the malarial fever cases were dosed with quinine, and that most of the quinine cases

had malarial fever or were threatened with it, the best disposition of these causes seems to be to group them together and attribute the deafness to an affection of the internal ear, for quinine is known to have a specific effect upon the labyrinth.

Meningitis includes all persons returned as deaf from cerebro-spinal meningitis, meningitis (simply), or spotted fever. It is probable that brain fever is the same thing under another name; but the number of cases returned under this head seems to be sufficiently large to justify the retention of brain fever as a specific cause.

Catarrh and colds probably constitute one and the same disease; but the number of cases of deafness due to colds seems to be large enough to demand separate recognition.

Among the assigned causes of deafness in the classified cases, the following are specially predominant: Catarrh and colds, 14,776; scarlet fever, 7,424; meningitis and brain fever, 6,004. These three causes alone include the majority of the classified cases (58.8 per cent.).

From Diagram 34 it appears that among the unclassified cases the principal assigned causes are:

Congenital	14,472	
Old age	3,361	
Military service	3,242	
Falls and blows	2,243	
Sickness	2,143	
Fever	1,436	
Hereditary	909	
		27,806
Minor causes		3,399
Aggregate unclassified		31,205

First in importance and overshadowing all of the others are the congenital cases—14,472 in number. These, with two others, tabulated under the head of "other causes unclassified," constitute the "deaf from birth"—14,474 cases.

It is unfortunate, considering the large numbers involved, that the assigned causes of deafness referred to in Diagram 34 are too vague to enable us to decide definitely the location or nature of the defect in the hearing apparatus.

Congenital deafness probably involves the internal ear, for the deaf from birth as a class are totally deaf. Falls and blows also are apt to produce injury to the internal ear. Those deaf from old age are, as a class, only partially deaf, so that in their case the internal ear is not incapacitated. It is probable that the defect relates chiefly to the external ear, resulting from impacted cerumen or thickening

of the drum membrane. Military service may mean almost anything. Deafness due to the discharge of artillery would affect the internal ear; so would typhoid fever and malarial fever accompanied by quinine. Other diseases incident to military service, like catarrh and colds arising from exposure to the weather, might involve the middle ear. Sickness, fever, and hereditary causes would probably not involve the external ear, but might refer either to the middle ear or the internal ear.

If all the causes of deafness could be classified by their effect on the ear, it is probable that the proportion deaf from affections of the external ear and of the internal ear would be considerably increased, leading to a corresponding diminution in the proportion deaf from affections of the middle ear.

In Tables XXXIX[1] and XL the classified causes of deafness, and the principal assigned causes, are presented in connection with their geographic distribution.

Table XXXIX shows, by geographic divisions and states and territories, the deaf from the classified causes, grouped according to the effect of the causes upon the ear.

Table XL shows, by states and territories and geographic divisions, the deaf from the principal assigned causes, classified and unclassified.

[1] Omitted from this republication.

TABLE XL.—*The Deaf, by Principal Assigned Causes, for States and Territories.*

STATE OR TERRITORY.	CLASSIFIED CAUSES.										UNCLASSIFIED CAUSES.						
	Scarlet fever.	Disease of ear.	Measles.	Influenza.	Catarrh.	Colds.	Malarial fever and quinine.	Meningitis.	Brain fever.	Typhoid fever.	Congenital.	Old age.	Military service.	Falls and blows.	Sickness.	Fever.	Hereditary.
Continental United States.....	7,424	4,210	2,469	1,776	11,702	3,074	1,636	3,991	2,013	2,055	14,472	3,361	3,242	2,243	2,143	1,436	909
North Atlantic division.....	3,483	1,095	761	637	4,020	1,132	221	882	549	516	3,466	1,392	919	822	533	315	387
New England.....	1,077	409	241	202	1,440	355	57	168	104	130	950	527	254	255	126	116	146
Maine.....	137	84	44	29	213	37	6	9	15	10	186	51	50	36	14	20	19
New Hampshire.....	100	57	12	19	137	28	7	6	8	13	57	51	22	12	14	9	12
Vermont.....	88	31	18	24	153	33	.....	3	.....	9	29	52	41	20	8	12	15
Massachusetts	464	175	99	93	597	180	15	103	49	64	432	256	109	127	55	46	70
Rhode Island	85	25	22	7	94	19	4	9	8	5	56	28	16	16	9	8	10
Connecticut.....	203	37	46	30	246	58	25	38	24	29	190	89	16	44	26	21	20
Southern North Atlantic...	2,406	686	520	435	2,580	777	164	714	445	386	2,516	865	665	567	407	199	241
New York.....	1,179	328	233	194	1,402	390	79	386	241	170	1,178	482	285	316	195	84	127
New Jersey.....	289	108	62	54	313	94	33	45	39	43	228	114	62	59	38	12	38
Pennsylvania	938	250	225	187	865	293	52	283	165	173	1,110	269	318	192	174	103	76
South Atlantic division.....	599	561	249	153	863	342	256	313	99	241	2,721	327	313	229	243	196	105
Northern South Atlantic...	444	260	145	93	497	206	87	160	66	154	1,152	205	199	130	127	77	65
Delaware.....	20	5	10	6	35	14	4	1	3	5	36	7	9	7	7	1	5
Maryland.....	148	62	40	36	157	65	19	32	20	76	291	60	45	44	31	11	15
District of Columbia.....	49	11	8	8	58	27	6	40	11	17	51	58	28	17	13	7	2
Virginia..	103	116	47	29	147	63	44	51	11	36	527	63	73	39	55	26	29
West Virginia.....	124	66	40	14	100	37	14	36	21	20	247	17	44	23	21	32	14
Southern South Atlantic...	155	301	104	60	366	136	169	153	33	87	1,569	122	114	99	116	119	40
North Carolina.....	57	110	31	22	93	41	41	39	12	27	646	31	41	28	30	47	13
South Carolina.....	13	39	22	9	56	25	42	29	6	12	333	34	12	24	32	25	11
Georgia	66	115	44	25	183	50	68	74	14	39	502	49	49	40	46	38	16
Florida.....	19	37	7	4	34	20	18	11	1	9	88	8	12	7	8	9	.. ..
North Central division	2,604	1,452	1,067	744	5,021	1,094	566	2,133	1,086	976	4,603	1,141	1,501	822	956	492	307
Eastern North Central.....	1,735	864	692	468	3,234	724	374	1,276	761	645	2,823	784	918	522	583	275	212
Ohio.....	529	248	207	143	900	183	86	243	197	178	790	236	314	142	112	76	68
Indiana	232	134	123	77	526	95	70	313	191	115	447	130	162	67	86	57	35

Illinois	415	261	181	125	918	227	108	400	220	168	706	229	215	172	197	81	57
Michigan	332	147	110	77	591	109	53	192	86	106	413	95	144	90	77	37	36
Wisconsin	227	74	71	46	299	110	7	128	67	78	467	94	83	51	111	24	16
Western North Central	869	588	375	276	1,787	370	242	857	325	331	1,780	357	583	300	373	217	95
Minnesota	140	54	32	39	213	72	9	85	59	69	325	40	51	43	85	15	13
Iowa	240	127	91	56	529	94	51	201	80	73	336	99	106	66	64	41	21
Missouri	197	232	109	87	477	85	105	353	92	92	578	111	185	81	95	84	32
North Dakota	18	10	9	4	28	10	.....	9	11	4	48	3	8	8	15	4	.....
South Dakota	38	22	8	8	53	17	2	18	6	16	52	8	11	19	27	7	5
Nebraska	110	51	51	31	165	45	10	62	31	28	161	45	65	30	36	21	10
Kansas	126	92	75	51	322	47	65	129	46	49	280	51	157	53	51	45	14
South Central division	431	931	303	171	1,155	288	504	460	192	217	3,164	339	394	243	326	357	85
Eastern South Central	274	500	177	100	585	159	252	241	111	134	1,832	216	234	125	155	201	55
Kentucky	140	164	73	35	216	58	73	105	64	78	630	91	90	46	48	91	20
Tennessee	88	146	50	35	180	45	54	64	24	25	554	42	78	22	42	67	20
Alabama	30	127	32	21	107	34	67	34	14	22	370	53	35	28	28	24	8
Mississippi	16	63	22	9	82	22	58	38	9	9	278	30	31	29	37	19	7
Western South Central	157	431	126	71	570	129	252	219	81	83	1,332	123	160	118	171	156	30
Louisiana	44	65	11	7	90	50	52	15	14	18	363	44	40	27	53	29	8
Arkansas	30	119	29	16	128	27	68	72	33	17	328	26	42	29	39	34	5
Indian Territory	7	25	6	3	28	4	15	14	8	2	43	1	3	3	5	10	1
Oklahoma	17	16	17	6	37	9	7	23	7	5	51	3	14	4	5	8	2
Texas	59	206	63	39	287	39	110	95	19	41	547	49	61	55	69	75	14
Western division	307	171	89	71	643	218	89	203	87	105	518	162	115	127	85	76	25
Rocky Mountain	72	40	23	19	161	47	16	55	12	23	149	49	37	40	17	27	3
Montana	14	4	3	6	17	5	4	7	2	1	16	1	4	3	3	6	.....
Idaho	13	7	3	2	25	10	3	8	1	6	17	2	5	5	3	2	.....
Wyoming	1	.....	.....	1	6	1	.....	1	3	1	2	.....	3	.....	.....	.....	1
Colorado	37	13	16	10	97	26	6	34	6	12	52	11	17	15	7	8	.....
New Mexico	7	16	1	.....	16	5	3	5	.....	3	62	35	8	17	4	11	2
Basin and Plateau	43	22	10	8	48	19	7	32	7	19	64	16	13	13	16	13	2
Arizona	4	7	.....	.....	4	.....	1	3	3	1	5	2	5	2	2	1	.....
Utah	35	12	9	7	35	15	4	27	3	16	54	10	6	11	10	12	2
Nevada	4	3	1	1	9	4	2	2	1	2	5	4	2	.....	4	.....	.....
Pacific	192	109	56	44	434	152	66	116	68	63	305	97	65	74	52	36	20
Washington	26	17	8	5	70	14	5	35	20	14	48	9	8	4	7	4	5
Oregon	42	18	20	8	55	18	8	24	13	13	52	7	16	18	13	7	1
California	124	74	28	31	309	120	53	57	35	36	205	81	41	52	32	25	14

THE FIRST SCANDINAVIAN CONFERENCE OF THE DEAF.

By Aders Hansen, Nyborg, Denmark.

Exactly one hundred years have passed since the first Institution for the Deaf was erected in Copenhagen, the Danish capital, through a royal edict. It is, however, not only the schools for the deaf in Denmark that have celebrated the centenary jubilee, but in the hearts of many deaf people arose the desire to remember this important date in a worthy manner. Thus the Union of the Deaf of the country took the matter in hand, and it was seconded from many sides in its endeavor to create a general Scandinavian meeting for the deaf, and therefore invitations were sent out to the circles of the deaf in the neighboring countries—Norway, Sweden, and Finland.

The Danish government consolidated the plans by an appropriation of 10,000 crowns (about $2,700) to cover the expenses, and the conference consequently took place in Copenhagen this summer, August 18-22, under the presidency of the chief director of the royal Danish schools of the deaf, Dr. Goos, privy counsellor. Mr. C. Becker, a deaf man, was, however, the soul of the undertaking, although he has been ably seconded both by deaf and hearing helpers.

The attendance was very satisfactory—in total, 425 men and 288 women, of which the great majority were deaf persons, though almost all the teachers of the deaf in the Danish schools and several tachers from Norway, Sweden, and Finland had taken the long journey to join the meeting.

Five hundred and twenty-four members were from Denmark, 6 from Sleswig, 89 from Sweden, 43 from Finland, 39 from Norway, 1 from Russia, and 8 from Germany.

A great number of matters were discussed at this gathering, a striking illustration of the progress the deaf have accomplished in one century, proving that the deaf person is not now an illiterate being, void of purposes and ideas. There were read in all 31 papers, and 89 persons presented their views in the discussions. It will thus be seen that the meeting was both busy and eloquent.

It would take too much space to enumerate the titles of all these papers, and I shall confine myself to mentioning only a few of them, dealing with subjects of some general interest.

Mr. C. Becker, of Copenhagen, read a paper on "Kindergartens for the Little Deaf Child." Some attempts have already been made in Copenhagen to induce parents of little deaf children to send them to kindergartens for hearing children, but there is still much left to be done. Mr. Nordin, superintendent of the school for the deaf at Venersborg, Sweden, told about the kindergarten now established in Gothenborg. It was a blessing to many small deaf children who would, but for it, have dwelt in darkness for years, until they had been admitted in the ordinary deaf school. He would be glad to see such kindergartens for deaf children established everywhere, as they had proved to further the instruction in the regular schools.

Miss Inzeborg Naetved, Copenhagen, contended that some formal instruction in grammar ought to be introduced in the schools for the deaf, at least to the brighter pupils. When she was corrected by her teacher, during her school time, the teacher only told her that a given phrase had to be put in this or that way, but never *why*. She felt sure that she would greatly have benefited by a grammatical instruction.

Dr. Forchhammer, Nyborg, disagreed with the speaker, but Mr. A. Hansen felt inclined to permit a discreet use of some formal grammar in the case of bright pupils.

Mr. Knut Haessler, Stockholm, brought up the old question of "Signs in the Education of the Deaf." He advocated the use of signs in the school instruction, and wondered why the European teachers of the deaf did not go to America to study the combined method there in use, as he believed that great advantages were lost to the deaf child without the aid of signs.

Mr. A. Hansen told that he had just been in America to study the methods, but he did not find the results superior in the schools where the combined methods were in use, to what he saw in oral schools; he was rather inclined to add that he found the contrary. Nobody in the oral school at Nyborg would forbid the little deaf child, who had no better means to express his thoughts, the use of natural gestures.

Mr. Laurits Joergensen, of Copenhagen, himself deaf, but speaking very fluently and distinctly, contended that the introduction of signs in the schools would not further, but handicap the final results of education.

The opinion held by these and other speakers differed decidedly; but the majority of the Conference, the younger generations, especially from Norway and Denmark, voted against the use of conventional signs in instruction in the oral schools.

Mr. Laurits Joergensen, Copenhagen, and E. Luck, M. A., Finland, were spokesmen for the creation of supplementary instruction for the adult deaf of the Scandinavian countries. Mr. Joergensen wanted an establishment, smaller, but on similar lines as Gallaudet College. The demands of Mr. Luck were more modest. He wanted this supplementary education given in a high school of the kind that are to be found all over the rural districts in Denmark and partly in the other Scandinavian countries. (Similar high schools for the country youth are also found in some Danish settlements in Iowa and Nebraska, U. S. A.) Mr. L. Joergensen wished the deaf youth so well equipped that they could enter the civil service—why should the deaf man have always to toil as a farmer or an artisan?

A deaf farmer, P. Bach, recommended that a greater percentage than hitherto should go in for farming; it was a healthy occupation, and perhaps as remunerative as that of an artisan. He was glad that an agricultural school was very soon to be started in Nyborg for young deaf men.

Mr. Oesterberg, from Stockholm, read another paper on the same subject. He contended that deaf farmers ought to get some aid from the state to acquire land.

Mr. J. Hirn, of Finland, editor of a newspaper, and well acquainted with the sign-language, proposed to try to create uniformity in the sign-language of the Scandinavian countries by the appointment of a committee whose task it should be to collect correct information of the signs in use through photographs, similar to what has been done in Denmark by the pastor of the deaf-mute congregation, the Rev. Mr. Joergensen, whose collection, however, only contained some few hundred signs. When the committee was in possession of an extensive collection, a selection should be made out of it. The impressive and nice signs should be preferred, and the rather ugly ones should be excluded. A sign-language, common to the Scandinavian deaf, would further the intercourse among them and serve to their spiritual development. (Mr. Hirn proposed a similar thing at the International Conference in Paris, 1900.) Also the manual alphabets, used in the said countries, differ, and Mr. Hirn suggested that the members of the committee should learn the different systems, and thus extend the knowledge of them to the other places.

A question which provoked a very animated exchange of opinions, though not of great practical consequence, was, whether the graduates of the oral schools should be designated as "deaf and dumb," or only as "deaf." The majority of the Norwegian delegates and about the half part of the Danish members desired to be mentioned as "deaf," whilst the Danish and the Swedish fraction, especially they of the older generation, feared that the introduction of two designations would lead to the splitting up of the deaf into two different social groups, one of first-class and the other of an inferior quality.

Mr. Madsen, Copenhagen, read a paper on "Temperance." He

wanted this subject elucidated in the school, together with general hygiene (this plan is, for instance, already in practice in the Nyborg school).

Mr. Chr. Petersen, Copenhagen, recommended the appointment of an attorney, well conversant with the ways of thinking of the deaf, as counsellor for the deaf in all judicial affairs, as it now was very difficult for the deaf to be properly understood. He suggested that the government should pay the expenses of such an arrangement, and that the attorney should live in Copenhagen, the traveling expenses, when he was called to provincial towns, to be refunded to him by the state.

Mr. Chr. Jensen, of Odense, Denmark, spoke in favor of an extension of the special missionary care, which the Danish state church some years ago established by appointing a special clergyman for the deaf. But as the church building for the deaf congregation is in Copenhagen, where divine service is held twice each Sunday, the deaf population outside the capital has no opportunity to attend services and holy communion except on week days when the pastor comes to the different country places. The speaker complained of the loss this meant to the working man, and the difficulty it often caused him to get his employer's permission to be absent from work to go to church.

Rev. J. Joergensen promised to consider the matter seriously, though it would be difficult to solve the problem. Even the appointment of one missionary or clergyman more would not suffice to create regular Sunday service all over the country.

An excellent exhibition of objects made by deaf and dumb people was connected with the Conference, to show to the hearing community the skill of the deaf worker, and thus induce employers to take him into their service. All the leading newspapers in Copenhagen mentioned the exhibition in a very flattering manner, and there was quite an influx through its gates. There is reason to believe that this exhibition will have favorable effect on the demand for deaf workmen by employers who hitherto have refrained from using them in their shops and factories.

Mr. Schioldann, a builder in Copenhagen, deserves the gratitude of the deaf for the arrangement of this exhibition. Another friend of the deaf, Mr. Thomassen, was likewise of inestimable help for the success of the Conference.

Two deaf men were decorated with the order of Danebroz by the King, as a sign of public appreciation of the energy and skill which had been displayed by the deaf themselves upon this occasion.

By Lars A. Havstad, Christiania, Norway.

In Europe as well as in America the Deaf have meetings or congresses of their own, sometimes international, sometimes national or local. The last International Congress of the Deaf was held in

Paris in 1900, but since the English, the German, and other Deaf have met in their respective countries.

The first Scandinavian, or rather, Northern, Congress of the Deaf (for Finland was included) met last August at Copenhagen, the capital of Denmark, on occasion of the hundredth anniversary of the Institution for the Deaf and Dumb in that city. There was a very large attendance—some seven hundred being present from Denmark, Norway, Sweden, and Finland. In connection with the congress there was an exhibition of works produced by Deaf men and women, including all sorts of things, from needlework to drawings of art, architecture, and engineering, paintings and sculpture. This exhibition gave a very favorable impression of the degree of ability and culture attained by the Deaf of the Northern Countries.

The themes discussed by the Congress were partly such as are known from the international meetings; partly, however, such as relate to particular Scandinavian conditions.

The debate especially became animated when one of the Norwegian delegates, Mr. C. Holmsen, read a paper upon the question, "Deaf and Dumb, or Simply Deaf?" He pointed out that the Norwegian authorities had a few years ago decided that the schools are no longer to be called schools for Deaf and Dumb, but only schools for Deaf children, and he wished this example to be followed by Denmark and Sweden, because the old name was apt to convey to the public the false impression that the pupils were in some way weak-minded, or intellectually abnormal. He also mentioned that the term Deaf was rapidly gaining ground in America and on the British Isles, and that in these countries it was approved also by many not taught by the oral method.

Most Danish and Swedish Deaf present, of which many had been educated by the manual method, were, however, against this change, and their views were supported by several teachers present. It was argued that the word Deaf would convey the idea that the class of individuals mentioned were only hard of hearing and had not the serious defects indicated by the words Deaf and Dumb, or Deaf-mute. No vote was take upon the subject.

If I may give my own opinion as to the prospects of the old and the new name, I think that the new one will gain ground in the same measure as the number of manually taught Deaf dwindles and the number of the orally taught grows. But it must also be borne in mind that the influence of German usage is great, especially in Denmark, and the first-named great country retains the word "taubstumm," although using the oral method only. It is chiefly because the word taub in German is apt to be confounded with the word Taube (dove, pigeon). On that account many Germans proposed to call the Deaf "Gehörlos" (literally hearingless, corresponding to sightless), but the proposed word does not sound natural.

In Norway we have no difficulty in using the word Deaf (in Norwegian döv), as it cannot be mistaken for any other word, and the two other Scandinavian countries ought to be in the same case.

VISIT OF ENQUIRY TO AMERICAN SCHOOLS FOR THE DEAF.[1]

By Frank G. Barnes, London, England.

[This pamphlet of 23 pages, by Mr. Frank G. Barnes, Headmaster of the Homerton Residential School for the Deaf, London, and Honorary Secretary of the National Association of Teachers of the Deaf, is a report of a visit recently made to American schools by him, in company with Mr. W. A. Addison, of the Glasgow School for the Deaf. Mr. Barnes is a teacher of large and varied experience in the work, and his report shows him to be not only a keen and discriminating observer, but one as fair in his conclusions as he is frank in his statement of them. We regret that we cannot print the report entire, but the extracts given cover the salient points made and embrace the conclusions arrived at by Mr. Barnes upon the questions that chiefly occupied his attention—Editor Review.]

For many years Teachers of the Deaf in Great Britain have had a valuable means of obtaining information on the work of educating the deaf in America. Through the instrumentality of the Volta Bureau, almost every school has been regularly supplied with school reports and all the published literature appertaining to the schools and institutions for the deaf on the other side of the Atlantic.

The very existence of the Volta Bureau is typical of the difference between the estimation in which education is held in the Old Country and the New World.

Founded by Dr. A. Graham Bell with the money he received as the Volta Prize from the French Government for the invention of the telephone, the Volta Bureau in Washington was built and endowed "for the increase and diffusion of knowledge relating to the Deaf."

The information so generously supplied to teachers of the deaf in this country has proved of the greatest interest and value, and has tended to stimulate a keen desire to become personally acquainted with the work done in the Deaf Schools of America. It was, therefore, with pleasure I found I was able to avail myself of the offer

[1] From a "Report upon a Visit of Enquiry to American Schools for the Deaf," under the scheme arranged by A. Mosely, Esq., C. M. G. February and March, 1907. By Frank G. Barnes, London.

of Mr. Mosely to personally ascertain the position of the work, and I outlined a number of headings, bearing on almost every phase of the work, with a view to obtaining a good idea of the points of agreement and difference between our methods, conditions, and results, and those obtained in America.

I also desired to obtain information relating to the "blind-deaf" and of the work among the blind, and, finally, any points bearing on the whole question of segregating and training mentally defective children.

A comparison of the condition and results of the education of the deaf I found to be very difficult to make, as in the short period of seven weeks it was almost impossible to do more than gain a superficial impression of the work of Deaf Schools in the Eastern States of America and Canada.

As in this country, the schools are far apart, but the distances between them are much greater. This involved long journeys, and, consequently, it was thought best to select typical schools and spend, when possible, several days in each, rather than attempt to see a large number of schools and have less time to actually examine the work.

The following schools for the deaf were visited: New York Institution, Fanwood (450 pupils); Institution for the Improved Instruction of Deaf Mutes, Lexington Avenue, New York (250 pupils); Wright (private) Oral School, New York (25 pupils); Columbia Institution (Gallaudet College), Washington (100 students); Kendall School for the Deaf, Washington (60 pupils); Pennsylvania Institute for the Deaf and Dumb, Mount Airy, Philadelphia (500 pupils); Home for Teaching Speech to Little Deaf Children, Bala, Philadelphia (63 pupils); Western Pennsylvania Institute for the Deaf and Dumb, Edgewood Park, Pittsburg (225 pupils); Day Schools for the Deaf at the Normal Practice School, the Yale School, the Darwin School, the Goethe School, the Burr School, Chicago (about 250 pupils); School for the Deaf, Milwaukee, Wisconsin (70 pupils); Michigan School for the Deaf, Flint, Michigan (380 pupils); Western New York Institution for the Deaf and Dumb, Rochester, New York (200 pupils); Ontario Institution for the Deaf and Dumb, Belleville, Canada (240 pupils); Mackay Institution for Protestant Deaf Mutes and Blind, Montreal (60 pupils); Catholic Male and Female Institutions, Mile End, and St. Denis Street, Montreal (about 300 pupils); Clarke Oral School, Northampton, Massachusetts (150 pupils); Horace Mann School for the Deaf, Boston, Massachusetts (150 pupils); American School for the Deaf, Hartford, Connecticut (180 pupils).

The total number of children in these schools in round numbers was about 3,400, or nearly one-third of the whole number in the schools for the deaf in the United States and Canada.

The fact of coming into contact with such a large number of

pupils and their teachers gave an opportunity of forming some valuable general impressions, but I attach much more importance to the opinions expressed by experienced American teachers than to any conclusions I was able to form from my own observations.

Conditions and School Attendance.

In Great Britain the education of the deaf is compulsory, and practically every deaf child is now brought into the schools. Experience has shown in England that since the passing of the Act of 1893 the general average of intelligence of the deaf children coming under instruction has been lower than it was before the passing of the Act, and this points to the conclusion that the lowest type of children do not attend school so well under a "permissive" law as they do when attendance is compulsory. In America, generally speaking, there is no compulsory attendance for deaf children. In some States deaf children are supposed to come under the general statutes enforcing attendance at school, but even in those cases the "two-mile-limit" similar to the clause in our English Education Act, renders the law inapplicable to the majority of the deaf children, very few of whom live within two miles of the school for the deaf.

The last census gave the deaf population of the United States as 89,287. Taking the usual one-fifth of this number as being of school age (though owing to the extension of the school age in America the proportion should be larger than one-fifth), there ought to be about 18,000 pupils under instruction. The last return given of the children in the schools showed a total of less than 12,000.

Number of Schools in United States...	131;	pupils..	11,259
" " " Canada.....	6;	" ..	735
	137		11,994

This appears to point to the fact that about 33 per cent. of the deaf children in America are not under instruction, and bears out the complaints of many teachers that promising pupils are often retained in their homes after the summer vacations because their labor, especially in agricultural districts, is very valuable. It also, to some extent, confirms a statement given in the Report of the Board of Education of New York City that 700 deaf children are not under instruction, though perhaps this number is exaggerated.

American children appear bigger, better developed, and more matured than the majority of our town-bred children in England, possibly from the reason stated above—the lower type such as we get being presumably absent. It seems to me, therefore, that the standard of intellectual capacity among the children entering the American Schools for the Deaf was higher than in our British Schools.

Of the children in the schools, too, there appeared to be a larger proportion of semi-mutes and partial-hearing children than is the case in our own schools.

As a rule the school course was arranged for 12 years, and the object of the school work appeared to be the production of the "graduating" pupil, *i. e.*, the pupil who remained in school until he completed the full course. The schools in many cases were larger than ours and so permitted of better classification, with the result that in the higher grades of the schools there was to be found a selection from a larger number of pupils than could be the case in smaller schools, and sometimes there were several divisions of the same grade—a, b, c, d—so that in a and b grades there might be the "crème de la crème" of several hundred pupils, and among these there would be a large proportion of partially-hearing pupils, or of those who had lost their hearing after they had acquired speech, and had had the advantage of the intellectual development inseparable from the possession of speech up to that point.

Systems of Instruction.

Repeated statements have been made in this country that children taught on the "manual" method, or a "combined" system, are mentally superior to the "orally" taught deaf, except in a few special cases; and comparisons have been made between what has been termed the "American System" and the oral method, as mediums for the education of the deaf. Statements based on those comparisons have often been made to the effect that the deaf of America are better educated than the deaf at home, because they have the advantage of being instructed by the "combined" system. These statements are made by those who are opposed to the general adoption of the oral method of instructing the deaf, and, consequently, I made a special point of not only observing the methods and results bearing on this question, but, also, asked for, and obtained, the opinions of all the experienced teachers of the deaf with whom I came in contact.

In the schools visited I found the same diversity of opinions as to the methods to be adopted in the instruction of the deaf as are to be found in this country. There is no "American System," and the methods vary in almost every school. Some schools were entirely oral, and others were conducted under some form of the "combined" system. But the interpretation of the latter term varies very widely. In some of the combined schools almost the whole of the class work is carried on by the oral method, and only a few pupils are taught manually, by means of the single-handed alphabet and signs; but in other schools the proportion of time and attention given to the two methods is entirely reversed, and the whole of the instruction is carried on by silent methods, sometimes almost entirely by "signs," and speech is only taught to a few pupils for a short period each day.

For instance, in one school only, 50 per cent. of the pupils received any oral instruction, and in this case they were only taught to articulate and read speech from the lips for 36 minutes daily—the time of one teacher being divided for three hours between five

classes; in another school only 25 per cent. of the pupils were under instruction orally for 40 minutes daily, and in each case the remainder of the school period of more than four hours was given over entirely to silent methods. This form of combination appeared to me to be unsatisfactory; the short time devoted to speech was wasted for practical purposes in the majority of cases, as neither facility nor intelligibility could be obtained with so little attention paid to the subject, and no good results could possibly be expected from speech, which was being treated rather as an accomplishment or an "extra," than as a constant means of communication.

In some of the schools visited every encouragement was given to the full development of speech, and it was only relegated to a secondary position, or dropped altogether, when experience had shown that apparently it was going to be of little practical value in the after life of the pupil. In a few schools it was maintained at all costs, utilized to the fullest extent, both as a means of instruction and in the daily out-of-school life of the pupils, and yet, so far as I could find, there was no loss of mental development, there was no cramping of the natural vivacity and character of the pupils, and the attainments were quite equal, where they did not actually surpass, those of similar pupils in "combined" schools.

On this point the opinion of one of the most able and experienced of the principals of American Institutions is valuable. He says:

"Articulation teaching as a sort of ornamental branch, not highly ornamental at that, is a very different thing from teaching speech by and through speech and as a means of mental development and mental culture. The former is but the dim shadow of the end sought for, while in the latter is found the full fruition of the teachers' aims and efforts, the realization of the pupils' desires, the fulfillment of the parents' hopes and prayers.

"There are but two methods of teaching the deaf—the oral or speech method and the manual or sign method. All methods that are not oral in principle and practice are manual. The attempt to combine these two methods in the instruction of the same pupil, under what is styled the 'combined' system, is, in my opinion, for the production of the best speech results—a demonstrated failure; they do not, will not, cannot combine."

According to recent returns, the number of children taught speech in American Schools has increased from 27 per cent. to 67 per cent. in the last 20 years. The following summary obtained by the Association to Promote the Teaching of Speech to the Deaf in 1904 gives useful information, not only of the extent to which speech is taught, but also to what extent it is used by the pupils:

	United States.		Canada.	
Taught speech	7,578	67%	354	48%
Not taught speech	3,681	33%	381	52%
Speech used in school and outside	2,050	18%	179	25%
Speech used in school and spelling outside	10	0.1%	75	10%
Speech used in school, spelling and signs outside	1,655	15%	5	0.7%

Of the 67 per cent. taught speech 48.3 per cent. were taught entirely orally, 17.9 per cent. have lessons in Articulation and Lip-reading, but it was not used as a means of instruction.

Enquiries were addressed to principals and experienced teachers in every school as to whether in their opinion *every* deaf child could be satisfactorily taught by the oral method, and the replies generally were against the universal application of this method. In some few cases pronounced oralists declared that every child, except those mentally deficient, could be so taught, but the majority of American teachers stated that they believed that some proportion of the children needed some other means of instruction, in order to prevent undue expenditure of time and effort on what, in some cases, must be unsatisfactory results. Opinions differed greatly as to what proportion should be retained on the oral method; some placed the proportion as low as 20 per cent., whilst others claimed that 80 or 90 per cent. was not too high a proportion to ensure success by good oral teaching.

Generally, the instructors were theoretically against the admission of "signs" into the school-rooms, even in "combined schools," though they had no objection to finger spelling, but in actual practice human nature was too strong for teacher and pupil, and finger-spelling and signing went on freely, both *in* and out of school. The tendency to spell or sign whenever any difficulty arose in lip-reading resulted generally in a lack of effort and determination to perfect the power of lip-reading, which suffered in consequence, and confirmed the opinion of oral teachers that speech and lip-reading should be constantly used if they are to be effective, and that a combination of spelling and signs with speech must, in the majority of cases, tend to the annihilation of speech for the congenitally deaf. On the other hand, there seemed to be an advantage to the pupils to be well versed in finger-spelling for use among themselves, especially for out-of-school use. With rare exceptions, totally deaf children, before they have acquired a command of language, must gesticulate in communicating with each other, and this gesticulation gradually develops into a language of more or less "conventional" signs. Even under the strictest form of oralism some years must elapse before speech becomes a habit with such a child, and communicating daily by signs with his fellow-pupils tends to establish a sign-language as the easiest means of intercourse. It is almost too much to expect that a difficult and limited amount of speech could ever be willingly substituted for this, but if finger-spelling were adopted the children could gradually be led to its use in preference to signs, at least so far as their knowledge went, and in this way the pupils might obtain some practice in the use of "English" among themselves. This would ultimately be of great benefit to their speech and lip-reading, and in one American school great advantages were claimed for the substitution of spelling for "signs." But whatever method is adopted, what I saw in American schools led me to the conclusion, supported by the firm opinion of many American in-

structors, that any form of combination of finger-spelling or signing with oralism in school was not a success, and that the ultimate solution of the quarrel of the systems will be that as large a proportion of pupils as possible will be taught orally, and the remainder by the finger-alphabet method, to the exclusion of signs as far as school-room work is concerned, and if these different methods could be carried on in entirely different schools, it would be better than in separate departments of the same school. It was generally recognized by the American teachers that some sort of classification of deaf children was desirable.

"One of the most pressing needs of the American schools, whether deaf or hearing, of the present time, a need that is receiving careful consideration at the hands of our best educators, is a new classification of pupils for purposes of care and instruction. Up to this time but one basis of classification, that of mental development, has been recognized. All classes of children are received into one and the same school, regardless of physical conditions or previous advantages. In our special schools the totally deaf, the semi-deaf, the mute, the semi-mute, and, in too many instances, the feeble-minded, are admitted to the same school, and maintained there regardless of consequences. It does not infrequently happen that children, partially deaf, or recently become deaf, with speech but slightly affected, are placed in schools where they are, perforce, suffered to mingle with children wholly unlike themselves. This is a great wrong, an unneccessary wrong, a wrong that some day must be righted. Our schools, of whatever character, should be so. systematized that proper segregation and classification on a physical as well as a mental basis may be easily and readily carried into effect. The semi-deaf and the semi-mute should constitute one class, and be maintained and instructed according to mental advancement by themselves; the congenitally deaf should form another distinct class, to be classified and graded and instructed by themselves, and the feeble-minded and those of very low mentality, whether born deaf, or semi-mute, or semi-deaf, should constitute quite another class, and be maintained and instructed in schools quite apart from the others."

This method of separating the semi-deaf and semi-mute, and the feeble-minded children has been tried with great success in Denmark and Schleswig, and much interest was evinced by the teachers in America in the arrangement in London of providing schools for elder pupils, and a school for the mentally defective deaf. This was considered a step in the right direction, but only a step, and some form of separate provision for the semi-mute and semi-deaf away from the totally congenital deaf was considered advisable. Attention is being paid to this matter in the State of New York, and it is probable that in the near future something will be done to set apart various institutions for dealing exclusively with one particular class, instead of each school attempting to deal with every form of deaf-mutism which presents iself.

RESULTS.

The points of chief interest to British enquirers appear to be:

(1) How do the results of the teaching in American schools compare with what is done for British deaf children, up to the age of 16?

(2) What do the American pupils gain by their longer school period, and the effect on the individual, and the class as a whole.

In going through the various schools one could not fail to be struck with the similarity of the methods and means adopted in dealing with the children. In nearly all schools the early stages in the Kindergarten and Primary departments were devoted to "sense" training, the gradual acquisition of the elements of speech (Articulation), and the building up of simple language. In this they correspond to the initial stages in Great Britain, except that in some of the American schools facility in the use of simple language, and lip-reading was developed much earlier than with us, by means of simple stories. Some most interesting examples were given of the ability of children of from 18 months to 2 years in school to understand and reproduce in speech and writing a short story told by the teacher. Proceeding much on the same lines of the development of language as with us, the pupils passed through the lower grades of the school up to the fifth or sixth year, when there was a more general adoption of ordinary school books for such subjects as Arithmetic, Geography, History, and Literature.

After the completion of the fifth or sixth year, when the pupils reached the advanced grades of the school, instead of each teacher taking the whole of the subjects it was a common practice to "specialize" on definite subjects. Thus one teacher took the whole of the Arithmetic of the upper school, another the Geography, etc. This plan appeared to work admirably in various ways. It produced greater co-ordination in the subjects throughout the whole of the upper school, it afforded the pupils the benefit of profiting by the best teacher of each subject, and it gave the teacher the opportunity of making a hobby of his or her own subject, and collecting all the various objects and illustrations connected with it likely to interest and help the pupils.

The language of the ordinary school books used in the upper grades was, as a rule, too difficult for the pupil's full comprehension, and it was in some cases doubtful whether there was not a waste of power involved in having to translate *down* to the pupil's capacity, the idiomatic phraseology of the books. The results, however, seemed to justify the means adopted, as the students became more and more accustomed to the use of books, to draw their own facts from books, and referred to them freely for information.

With the extended school period available this appeared to be quite successful. Whether it would be equally satisfactory with the shorter school life of the deaf pupil in Great Britain is open to question. A means which may be successful when begun with pupils

at 12 or 13 and continued to 18 or 19, might not produce even proportionate results with a school life brought to a close abruptly at 16.

It is unfortunately true that British deaf children are not as a rule sufficiently advanced at the age of 16 to be able to use ordinary books with interest or profit, and, except in the cases of brighter pupils, the ability declines rather than increases after the pupil leaves school. It seemed to me that the introduction of school books at an early period had two good results: First, it met, and to some extent overcame, the difficulty of book language earlier than with us; secondly, it had a most wholesome effect on the deaf child, by placing the standard of "normality" in his own hands and making him comprehend exactly where he stood in comparison with his hearing brothers and sisters.

This use of books, too, gave a more general range to the knowledge of the pupils, and, while this might not be so exact as is usual with British children, it gave a broader outlook on life, and tended to greater self-reliance, whilst the individual effort needed to find information in a book helped in the formation of character.

Written tests were taken in a number of schools, and these showed that in the capacity to use original language in composition and descriptive writing the pupils between the ages of 14 to 16 were no better than with us; in Arithmetic and Geography the children did not seem to have covered so much ground, but in History and Literature, and the general knowledge involved in the acquirement of these subjects, they were ahead of our pupils.

These results carried on for two or three additional years just at the period when the pupil is beginning to comprehend the object of his education, and to find enjoyment in intellectual pursuits, has produced in the American schools a "graduating" pupil between the ages of 18 and 20, with a good command of language and ability to use it, either in a spoken or written form, with a good general knowledge, and a full understanding of his relative position, in point of intelligence, with the hearing people with whom he will have to mix in after life. "Graduation" means having come through the complete course prescribed by the school, but does not imply that the student has proved by examination that he has reached a certain standard of attainment.

It was variously stated that from 40 per cent. to 60 per cent. of the pupils reached the "graduating" stage; some of the remainder never reached that point of mental development though they remained in school; and others left before they had been long enough to reach it; so that it is difficult to make a definite comparison of the final results of the system on the whole of the deaf pupils of America with our own. There can be no doubt that for those who completed the school courses, the results must be considered very satisfactory, and this achievement by even a proportion of the total number of students has a bearing on the status of the whole of the deaf population, and gives them a standing in the outside world which is better than with us.

Another factor which has had a bearing on the higher results of the education of the deaf in America, has been the establishment of the Columbia Institution for the Deaf and Dumb (Gallaudet College), Washington.

This Institution provides a College career for young men and women after they have completed the work done in the ordinary Deaf and Dumb schools. The syllabus says:

"The College makes provision for thorough instruction in the essentials of a liberal education, without attempting to do the special work of the polytechnic schools on the one hand, or that of the University on the other. The course of higher instruction leading to collegiate degrees occupies four years, and embraces courses in Languages (Ancient and Modern), Mathematics, Natural Science, History, Philosophy and Political Science. The entire curriculum, including an introductory year, embraces five years. The Corporation of the College is authorized by Act of Congress to confer 'such degrees in the arts and sciences as are likely to be usually granted in Colleges.'"

The fees amount to 250 dollars per head per annum, but provision is made for the admission of students by means of scholarships, a certain number of which are annually open to students nominated by the District of Columbia, and the States and Territories in the Union.

The students entering the College are naturally the cream of the educated deaf from the various schools and institutions of America, and it seemed to me that the provision of this higher education for the deaf was not only an excellent thing in itself, but was fraught with far-reaching effects on the whole spirit of deaf-mute education on that side of the Atlantic. For instance, immediately after the College was established, the principals of the institutions for the deaf met and passed the following resolutions:

"That this Conference recommends the establishment of high (*i. e.* secondary) classes in all the institutions where they do not now exist.

"That we recommend that the course of study in these high classes be as far as possible in harmony with the course required for admission to the National Deaf-Mute College."

Thus it will be seen that the standard set by the College served to bring all the schools into line, and to make the schemes of instruction lead towards the same end. It served to stimulate ambitious pupils and their teachers, and created a valuable public opinion in favor of higher education for the deaf.

No provision exists for the higher education of the deaf in Great Britain, and no matter how gifted, only the very wealthy can possibly avail themselves of the channels open to the hearing of proceeding to ordinary colleges to obtain a liberal education. The private tuition necessary to prepare for a collegiate course is out of the reach of the majority of the deaf in Great Britain, and the absence of a highly educated class among the congenitally deaf leads

to the natural conclusion in the average mind—ignorant of these facts—that the deaf are incapable of higher education.

Gallaudet College has disproved this, and in doing so has raised the public estimate of the deaf in America, and has become a goal which every aspiring boy or girl in the deaf schools may hope to reach.

Some schools and institutions do not contribute pupils to Gallaudet College, preferring, where possible, to send them to the ordinary Universities. There are many instances of success in this course, and recently several deaf pupils passed satisfactorily through Harvard. But these would naturally be not only exceptionally bright intellects, but must besides have been sufficiently well-to-do to be able to bear the expense, and in any case this plan could not suit all the well-educated deaf, so that I consider the Gallaudet College a most valuable adjunct to the whole scheme of the education of the deaf of America.

Institutions *v.* Day Schools.

The differences of opinion among teachers of the deaf in America on the question whether institutions or day schools are the better for the education of the deaf are as acute as they are on this side of the water.

Many experienced instructors hold that by congregating large numbers of deaf-mutes in an institution, there is a danger of accentuating their abnormality, of increasing the tendency to "sign," and also to add to the danger of the establishment of a deaf variety of the human race, by increasing the likelihood of intermarriage. The advocates of the day school system further claim that unless the deaf child is surrounded by hearing and speaking people he has not the proper inducement to speak and lip-read, and that as a consequence institution life is detrimental to oralism, and renders the pupils less self-reliant. On the other hand, the advocates of the institution plan strongly assert that very few homes are suited to the proper training of a deaf child, who is generally misunderstood, and consequently alternately petted and harshly treated; that the all-round training of an institution is quite as important as other branches of teaching; that the day schools have not the same opportunities for classification or industrial training; and that while institutions are necessary for children from scattered districts they are preferable for all.

My twenty years' experience in both types of schools in England had made me familiar with all these arguments, and I found no new points in connection with this question during my visits to the day schools over there.

Chicago is the largest city having the day school system fully developed, and there were about 250 pupils scattered in 11 centres. One of the great difficulties in dealing with defective children in day schools is that of grading. It is almost impossible to collect into one center sufficient pupils to classify properly. This is overcome in

London by the Education Authority paying the fares of children travelling by train or tramcar, and we are thus able to get together enough children of one type to make a fairly well-graded centre. We have also a system of boarding-out to meet cases where for any reasons travelling to a centre is impossible. There appeared to be no such provision for "transportation" in Chicago, Milwaukee, or Boston. In Chicago, however, the difficulty of classification was partly overcome by an arrangement of the superintendent to set apart certain centres for the reception of pupils of certain grades or stages of instruction. But there was no means of enforcing attendance at any particular centre, and if a parent declined to send a child to the centre most suitable for his training, the teacher at the nearest centre had to make the best of the position, and give what personal attention was possible to such child.

In the States of Wisconsin and Michigan, small day schools are spread up and down the States, and a system of boarding-out under the supervision of a competent superintendent is carried on. Dr. A. Graham Bell says, "Wisconsin has startled America by the success of her methods" in dealing with the deaf. In all the three cities mentioned the day schools were well organized and doing excellent work, and in some cases children were proceeding from them to "hearing" high schools. But in all these places the teachers agreed that the method pursued in London of providing schools for elder scholars, where definite instruction in trades could be given, as well as the segregation of the defective deaf from the ordinary classes was a better arrangement than their own.

A return made last year gave the number of pupils in day schools as 950 under 150 teachers.

Of course, the industrial side of the training given in the day schools is not nearly so well developed as in the majority of the institutions.

Infant Schools.

The Blind and Deaf Children's Act of 1893 makes the attendance of deaf children compulsory at the age of 7 years, but in many schools children are received earlier if presented. But we have nothing in this country to correspond to the "Infant," or "Kindergarten" schools for the Deaf which have been established in America during the past 20 years. Some four or five of these schools have been established by private effort, and one has recently been taken over by the State of Pennsylvania. The main claim of the originators of this movement is that a deaf child cannot successfully be taught to speak unless he acquires speech as nearly as possible at the same period of life as the hearing child does; and, that unless he is trained in speech habits in infancy the vocal organs become rigid, and the speech acquired later is more artificial than it would be if practiced earlier. Another claim is that if a deaf child can be put under expert instruction at the age of 2 or 3 years, it should be able to acquire in about 6 years such an amount of speech, and

facility in lip reading that at the end of that period it ought to be able to take its place among normal children in ordinary public schools, and be able to take the lessons as well as a "hearing" child.

This latter prospect has attracted considerable attention in Great Britain, and it has been felt that if the statements made with regard to the success of this system will bear investigation, it would be a scheme worthy of imitation. What I saw of one of these schools did not convince me of the wisdom of the scheme, and I found that American instructors who are better able to judge of the success of these experiments are very divided in their opinions on the point.

Some are in favor of taking the children away from their homes as early as possible and placing them in "Home" schools of the above character, where speech effort, and lip-reading may be encouraged all through their infancy; other teachers claim that the proper environment is the family, where the deaf child is surrounded by a number of hearing people, and where, if the home is at all intelligent, the deaf child would receive a much larger share of normal training than he can get as a unit among a little deaf congregation where the deaf pupils outnumber the hearing people around them by about 6 or 8 to one.

Apart from what appeared to me to be the more than doubtful wisdom of grouping in the same classes children varying in age from 3 to 8, the methods adopted did not commend themselves to me. No definite instruction in articulation was given, but the attempt was made to make the children acquire language in words, phrases and sentences as a whole. This is no doubt a splendid training in lip-reading, and helps to develop the faculties of observation and receptivity; the baby gabble it encourages helps to preserve the instinct of speech, and taken on the whole these means would be excellent for little deaf children *under school age;* but they should then be placed under definite instruction in the production of the elements of speech, and their language taught on a scientifically arranged plan. It appeared to be a false premise that the eye could be made to assume the whole of the functions of the ear,—and that without special direction and training. Yet this is what those who teach speech in words and sentences seemed to assume. They spoke words to the child, gave orders and commands, made use of the idioms of every-day life, and expected the child not only to understand them, but also to acquire the ability to reproduce them without special directions as to the manipulation of his vocal organs. For children with a large amount of hearing, or for those who lost their hearing as the result of infantile disease, this plan may prove satisfactory, but the same means applied to a totally deaf child, without any conception of spoken language, could not possibly produce the same results.

This absence of regular drill in the elements of speech (articulation teaching), both in the Infant school referred to and one or two other schools for elder pupils where the same plan was adopted, did produce good lip-readers, but it did not produce intelligible speech as a rule among the totally deaf. This can only be acquired by skil-

ful, careful, and painstaking articulation teaching, and unless this is taken up fairly early in the child's school life, slipshod speech becomes a habit which can never be eradicated. As a matter of fact children taught on the "element" method acquired in some of the oral schools greater intelligibility and greater facility in the use of language by definite systematic instruction, in a much shorter period than the children who attend these "Infant" schools, or schools where the "elements" were not taught.

With regard to the claim that children passing through a school period of 6 or 7 years under the above conditions could successfully take their places in the grades of the common schools, the general opinion among American instructors was that it was an overstatement of the case, and with this view I entirely agree. It may be possible for specially gifted or specially favored deaf children, but not for the totally congenitally deaf child of average ability. Still there could be no doubt of the devotion and enthusiasm of both the "infant school" and "non-element system" adherents, and one could only wish that the same amount of enthusiasm was devoted to a more logical and systematic method of dealing with the problem of deaf education.

Aural Training.

One feature of the work in America which is greatly in advance of ours is the use of acoustic instruments for children who have remnants of hearing. This particular branch has never received in Great Britain the consideration it has deserved. Some experiments have been conducted at Glasgow, Margate and more recently at my own school at Homerton. In many of the American schools, however, a large amount of trouble and expense has been expended on this particular point, and in some schools at least efforts have been made to utilize every vestige of hearing possessed by the pupils. At Rochester one classroom was equipped with 13 telephones, connecting each pupil with the teacher's desk. At Flint a room was similarly equipped with a costly Akoulallion, at Milwaukee and New York much attention had been given to similar experiments, and several useful inventions for the use of the partially deaf had been devised by Dr. Currier and others. In view of the great importance attached to this matter by Dr. Kerr Love and others in our own country, this feature of the American schools might well be copied more generally.

Training of Teachers, etc.

As in this country schools in America are suffering from the lack of a regular supply of properly trained teachers. Several references to this point appeared in the Annual Reports last year.

"During the last few years the attention of the profession has been called more than ever before, to the great importance of having teachers well trained for the work. Heretofore many of the young

teachers seeking admission to the profession through normal classes have been poorly prepared as to general education, and have had too low a conception of the requirements of the work. Teaching the deaf is a high art, and one not easily acquired. It is fraught with difficulties little suspected by those who have not encountered them in the school room. It requires not only a broad general education, but also highly specialized training."

"The growth in popularity of the oral method of instruction has created a demand for well trained teachers which has not been fully met. When the last generation of men and women took up the work of teaching the deaf there were no trained teachers nor training schools for teachers. A young lady fresh from the high school was given a class and told to teach; this she did to her own satisfaction perhaps, but with the inevitable result that the class suffered grieviously at her hands. Such injustice is no longer necessary, for there are now several training schools for teachers of speech, the most notable being at Northampton, Mass.; Milwaukee, Wis.; Chicago, Ill.; and Washington, D. C. Besides these, teachers are trained at the various State schools, but unlike the normal schools for the education of public school teachers there is no standard common to any two of these schools, either in preliminary education or proficiency required for graduation. Teaching a deaf child to speak has almost reached the dignity of a science. It requires a knowledge of anatomy, and physiology of the vocal organs, and a thorough understanding of the elements of spoken language."

The normal school at Washington is a department of the Gallaudet College. In Chicago and Milwaukee the normal classes are carried on in connection with the day schools, and additional salaries are offered to teachers, who, holding the ordinary teachers' certificate, qualify for a diploma as a teacher of the deaf. In Chicago this additional sum amounts to about 200 dollars per annum. The normal department at Northampton is now partly carried on by the aid of funds placed at the disposal of the school by the Association to Promote the Teaching of Speech to the Deaf.

No account of American education of the deaf would be complete without some reference to the benefactions of Dr. A. Graham Bell. He not only founded and endowed the "Volta Bureau" for the diffusion of information relating to the deaf, but he has given 25,000 dollars to the Association to Promote the Teaching of Speech to the deaf; he has annually subscribed 1,500 dollars to its funds, and last year further endowed the Association with 75,000 dollars, to enable it to establish a normal department for the training of teachers of the deaf at Northampton in memory of his father, the late Dr. Melville Bell, inventor of the system of phonetics known as Visible Speech.

To sum up, as the result of my inquiry the most striking points of difference between our own efforts and those of America I found to be:

(1) The more general adoption of the "combined system" with

a more elaborate system of "signs" and a single-hand alphabet for manual spelling.

(2) A school course extending over 12 years.

(3) "Higher Education" as provided by Gallaudet College, and by the other schools sending graduates to Colleges and Universities.

(4) The adoption of ordinary school books for the study of History, Literature, etc., making "reading" more general, and affording a wider knowledge to the pupils.

(5) Definite "Trade" teaching given in the large institutions.

(6) The absence of "compulsory" attendance at school, and the higher average "type" of pupils received into the schools.

(7) The liberality with which schools are financed, enabling every idea to be fully developed regardless of cost, making it possible to sub-divide classes where necessary, even as low as from 3 to 5 pupils, and to provide costly appliances such as telephones and acoustic appliances.

(8) The benefactions of Dr. A. Graham Bell, which have materially assisted in developing and influencing the teaching of speech.

(9) And the official U. S. assistance in publishing reports of conventions, etc., thereby considerably helping in the diffusion of information on all matters relating to the work.

THE INSTITUTION PRESS.

ALBERT LOUIS EDGERTON CROUTER, A. M., LL.D.

Dr. Albert Louis Edgerton Crouter, Superintendent of the Pennsylvania Institution for the Deaf and Dumb, Mt. Airy, Philadelphia, was born near Belleville, Ontario, Canada, on September 15, 1846. He is of German-Lutheran descent on the father's side, and of English-Huguenot descent on the mother's side. His education was obtained in the public and high schools of Belleville, and at Albert College. After teaching for two years in the public schools near Belleville with success, he came, in January, 1866, to the United States, going as far west as Kansas. He there engaged for a short time in teaching in an English-Indian school at Shawneetown, Johnson County, and then, by a happy chance, was persuaded to accept a position in the Kansas School for the Deaf at Olathe, under Mr. Thomas Burnside, Principal. At the end of six months, although offered the principalship of the school, he resigned and came east the latter part of October, 1867, and accepted the position of junior teacher in the Pennsylvania Institution, then located in the center of the city. While employed in teaching, he continued his studies privately, attending lectures at the Franklin Institute and at the University of Pennsylvania. Teaching successfully various grades of classes from 1867 to 1884, he was in the latter year appointed to the Principalship of the Institution, succeeding Mr. Joshua Foster in that position. In his earlier years of teaching, he studied the sign language (he has few superiors as a sign maker) and the principles of sign-language instruction under Mr. A. B. Hutton, then Principal, who had himself been a pupil of Laurent Clerc, the celebrated deaf teacher brought from France by Thomas H. Gallaudet.

While yet a teacher, Dr. Crouter became interested in oral methods of instruction through a visit to the Clarke School for the Deaf at Northampton, Mass., in the summer of 1875, and was instrumental in having articulation teaching greatly extended in the Pennsylvania Institution in the autumn of that year. On taking charge of the Institution as Principal in 1884, he speedily reorganized the school departments, systematizing and greatly extending the course of study; he placed the Oral Department on a practical and an enduring basis; he greatly extended trade teaching; reduced the size of classes; increased the term of instruction and improved the teaching staff throughout. He took an active part in the erection of the new buildings at Mt. Airy in 1890-92, and in the removal of the several departments of the school to that place. He was elected a charter member of the American Association to Promote the Teaching of Speech to the Deaf and became a member of its Board of Directors in 1890, and has since taken a leading part in its growth and work. He was elected President of the Association upon the resignation of Dr. Alexander Graham Bell in 1904. He has contributed valuable papers upon the education of the deaf to the American Annals and the ASSOCIATION REVIEW, and is a member of several literary and educational societies.

In recognition of his successful work and literary attainments, the honorary degree of A. M. was conferred upon him by Gallaudet College in 1885, and the degree of LL.D. by Illinois College in 1894; and as marking his forty years of active service, the Board of Directors of the Institution granted him an extended leave of absence the past summer, during which he visited

Europe, and represented the Institution at the Sixth International Conference of Instructors of the Deaf at Edinburgh, reading, by special invitation, a paper on the organization and methods of the School, and enjoying the added honor of representing, as delegate, the United States Government.—[F. W. Booth in the Mt. Airy World (Pa.).]

The latest issue of the Mt. Airy World—that of November 7th—is mainly given up to a review of Dr. Crouter's work in the Pennsylvania Institution as teacher and principal during the forty years' term which he has just completed. Many interesting reminiscences are contributed by several hands. We have been especially interested in a review of Mr. Crouter's work as a teacher by that eminently clear-sighted woman, Miss Julia A. Foley, who lays special stress on his art in training his pupils to work and to think for themselves.

The present writer has known Dr. Crouter somewhat intimately and with ever-increasing admiration for some thirty years, and would like to venture a brief appreciation of him as the executive head of a big concern. The secret of his success, in our apprehension, lies deeper than his skill in teaching, his aptness for business affairs, his sound judgment of men and of things. It is in his robust, genuine, wholesouled manhood. By the law of his being, he must work, and work intensely, at something; and his powerful nature, driven like an electric generator, infallibly induces a similar current of energy in whoever may be associated with him. If he had started as a pirate, he would have been followed by the most reckless desperadoes that ever scourged the seas. Being what he is, he has drawn together under his direction a band of as highly trained, unselfish, enthusiastic, hard-working men and women as can be found in this or any other country. And much of their energy, unselfishness, and enthusiasm they have caught from him. We concede the truth of what others have said as to his keen observation, his aptness for details, with his grasp of general principles, of his charm of manner, of his power of organization and all the rest; still we hold that all this is but the mechanism—the fire that generates the power to drive it all is the sincerity, the love of God and man, the love of good work which is the frame and foundation of his being.

But Dr. Crouter has had his share of mere luck, too. He has had capable and earnest assistants—teachers, matrons, supervisors, and the rest—but he himself chose them and largely trained them for their work. So their good work goes to his credit and not to that of mere luck. But he did not select his superior officers, the members of the Board of Directors. You know how such Boards are made up in many States. The party Boss for the time being—or rather the Boss's lackey, who toadies to the Boss and bullies everybody else, a politician who is looking for a fat appointive office, another who has headed the delegation in favor of the Boss's man at the State Convention and in return claims the right to land one of his incapable dependents—who could never get a position elsewhere—pretty near the head of the institution pay-roll. And all of them tumbling over each other to carry out, or if possible to anticipate the least wish of the Boss, at whatever sacrifice of the interests of the school.

At Mt. Airy, on the contrary, you find one Director erecting a costly building for the school at his own expense, another contributing to the school paper, for the pleasure and profit of the pupils, a series of interesting studies of English History illustrated with rare cuts from his private library. And all of them giving their time and thought freely to the school with no thought but the benefit of the pupils. This is sheer good luck to the school and to Dr. Crouter, and he deserves no bit of credit therefor—except so far as their generosity has been encouraged by the spectacle of his own untiring and skillful work.—[Weston Jenkins in The Messenger (Ala.).]

The current issue of the Mt. Airy World is a "Crouter number," and a most interesting one it is, too, for it tells something of the great service for the deaf which Dr. Crouter has rendered during the past forty years.

Forty years of continuous activity in one profession is a record that is uncommon, and in the case of Dr. Crouter it has been one line of unbroken successes. Today Dr. Crouter is the executive head of the largest school for the Deaf in the world and is generally conceded to be one of the best posted men in the profession. His life history is indeed interesting. He is suave and popular with all, and if not a born diplomat he has made diplomacy a study until he is master of the science. Not one man in a thousand could have met the many obstacles that have arisen during these forty years and mastered them as he has with such apparent ease. His first trying position was when he was in fact but not in name the head of the Pennsylvania institution for several years during the latter years of Mr. Foster's reign. The whole management of the school was upon his young shoulders, but every step he took had to be with the greatest of finesse and kindness so as not to appear to be holding the reins of government which officially still remained in the hands of his invalid superior in office. This Mr. Crouter accomplished with singular skill, retaining the love and confidence to the very end of the man he was to succeed. Then the admirable manner in which he managed without friction to retire several old teachers, whose days of usefulness had passed but who themselves could not realize it, was another master stroke deserving credit. Then came the gradual enveloping of the Garrett Day School, which was done so quietly and with so much diplomacy. Still there is more to follow of the story of diplomacy, much of it probably known only to himself and a small number of others.

The writer's first introduction to Mr. Crouter was in the year 1882 at the Convention held at Jacksonville, Illinois. We seemed to have been attracted to each other at the time, for a little over a year thereafter I was asked to become one of his corps of teachers and accepted the invitation. This gave me a better chance to study the man and to admire him. He treated me like a brother, and had not other inducements been offered me I probably would have been yet a member of the faculty [manual department] of the great Pennsylvania institution. It hardly seems possible that friend Crouter is 61 years old. The last time I saw him, a little over two years ago, he seemed hardly older than twenty-five years ago. I knew he was my senior, and come to think of it I can hardly believe that I am one of the "old men" now, but to think that Crouter is sixty-one! My, my, my! Well, the secret is out and had to be told if we are to celebrate his forty years of service. which his friends all do with unreserved heartiness. Here in Louisiana, besides myself, one of his ex-pupils, Andrew J. Sullivan, throws his shillalah high into the vaulted blue with a hip, hip hurrah for Dr. Crouter and his forty years of service; at least he would do so were he himself not now a dignified teacher with as "high" a forehead as our good friend, the Doctor.—[S. T. Walker in The Pelican (La.).]

THE UNIVERSAL MUSEUM OF THE DEAF AT THE PARIS INSTITUTION.

It gives one a rather pleasant surprise when in a strange land to find that he is not altogether a stranger to the people there. Such was the experience of Dr. Crouter when he visited the National Institution for Deaf Mutes at Paris last July. After inspecting the class work he was conducted to a large room where an informal reception, with a little speech-making, was held. This room was filled with books, pictures, statues and cases of small objects, and they called it the Museum. The surprise came when one of the hosts produced portraits of Dr. Crouter and Benjamin D. Pettengill, a former teacher in the Pennsylvania Institution, for this Museum contains only pictures and objects connected with the education of the deaf and is known as the Universal Museum of Deaf-Mutes. This Museum dates back nearly thirty years when a collection was begun of objects relating exclusively to the history of the National Institution. So great was the interest manifested in this that in 1890 it was proposed to extend it to include the schools of the entire

world. The organization of this great work was entrusted to M. Théophile Denis, honorary chief of bureau to the Minister of the Interior, who has been ably assisted by Prof. Auguste Boyer.

The Museum is divided into two sections, the historical and the artistic. The former includes all those things that are in any way connected with the history of deaf mute education, while the latter contains art objects produced by the deaf themselves.

The historical section is subdivided as follows:

1. Views and plans of schools. Of these there are between three and four hundred, illustrating nearly all the schools of Europe and America, besides some in India, Australia and Japan. There are twenty views of the Pennsylvania Institution.

2. Portraits of founders, directors, professors and benefactors of schools. In this division there are one hundred eighty portraits of the Abbe de l'Epée alone. Besides the portraits of Dr. Crouter and B. D. Pettengill mentioned above, the Pennsylvania Institution is represented by Bishop White its first President, David G. Seixas, its first Principal, Lewis Weld and Joshua Foster, former principals. There is hardly a principal of a school in the United States whose portrait could not be produced from this great collection at a moment's warning, as was Dr. Crouter's.

3. Portraits of writers, philosophers, physicians and men in public life, from the earliest times to our own, who have in any way aided the instruction of the deaf.

4. Portraits of deaf persons distinguished in letters and in the arts and sciences; and also of the deaf-blind.

5. Articles of all kinds pertaining to the deaf, medals, manual alphabets, etc.

In the artistic section there are about four hundred works of deaf painters, sculptors, engravers, lithographers, architects and photographers. The only Americans represented are James Alexander, Alexander MacGregor, and Douglas Tilden.

We would earnestly advise all persons who have objects suitable to add to this collection to send them to the curator of this wonderful Museum and thus help along its work, which one visitor declared to be twofold, "to destroy the ignorance and prejudice of some, and to restore the victims of this ignorance and prejudice to the place in society which is their due."—[E. S. Thompson in Mt. Airy World (Pa.).]

NORMAL TRAINING WORK AT THE INDIANA SCHOOL.

This Normal Class, or class for teachers-in-training, as existing in this school at the present time had its inception in 1890 when Mr. Johnson first appointed a young woman as teacher of physical exercise, who was to serve also as substitute teacher, under guidance, as opportunity presented, through which means she was expected to acquire sufficient insight into the work and experience to become a regular teacher. This arrangement continued until 1894, when the kindergarten department was established and the oral department (established 1892) increased from one class to three. At that time one assistant, a teacher-in-training, was appointed for the kindergarten class, the former position of teacher of physical exercise being done away with. In 1896 three teachers-in-training were received, and their instruction along oral lines was begun; and the number in attendance at any one time since that date has been not less than three nor more than five. Prior to 1899 only one year's training was given to or required of each member of the class; but in that year a two-years' course covering kindergarten and oral work was established which has continued to date.

Since 1890 thirty-four young women have been enrolled as teachers-in-training or as members of this Normal Class. Of the entire number 18 are now teaching in various State Schools for the Deaf (10 in this institution), 8 have married, one has died, 4 are not engaged in schools for the deaf so far as known, and three are in the class at the present time.

The full term of this course for teachers-in-training is two years and no one is received for a less period; and but two (or three, according to circumstances) will be accepted each year. Candidates for admission must present testimonials of high character and standing, evidences of satisfactory preliminary scholastic attainment, certificates of good health and necessary strength, and be possessed of self-confidence, gentle firmness, patience, love for children, and a desire to make teaching a life profession—otherwise they would better not apply. A student's mind and habit, and an enthusiastic desire to accomplish things and succeed, are demanded. Admission to the privileges of this course means undivided attention, close application, and hard work on the part of the teachers-in-training for two years; and personal and social diversion will not be permitted to interfere with school or other duties, nor with periods of study.

When entering upon the discharge of their duties, the members of the class are given full and regular charge of assigned classes under supervision, in kindergarten or primary departments, or in both. They are also assigned certain monitorial duties with pupils, leading them to more intimate knowledge of the deaf child outside the school room. Supervision in the work is given by the chief kindergartner, the supervising principal of oral work, the supervising principal of primary grades, the normal instructors, and by the superintendent. In the Normal Class, upon stated days, there is given regular instruction under skilled teachers in Principles of Speech; in Physiology and Anatomy, concerning the respiratory organs, vocal organs, and the ear; and in Voice and Visible Speech. They are also required, as regular class work, to take up the study of the History of the Education of the Deaf; of Elements of Pedagogy and Psychology; and of Methods of Language teaching. Oral and written examinations are required during the year. A small but complete library of reference books for this normal work is provided for the use of the members of the class, who, however, must buy their own text-books.

The services of these teachers-in-training are required by the School at all times during the two scholastic years, without compensation. They are required to live in the institution, but room, board and laundry work are furnished them without cost. They are subject to all rules and regulations governing officers, teachers and employés, and their whole time must be devoted to the work. Positions as teachers are not promised them here nor guaranteed them elsewhere, and at the completion of their training course they must take their chances in securing suitable positions in other schools for the deaf, according to their capabilities.—[Silent Hoosier, (Ind.).]

LESLIE OREN BEFRIENDS A CRIPPLED SCHOOLMATE.

Yesterday a boy thirteen years of age with both legs off half way between the knee and body was brought to the Institution for the Education of the Deaf. He is a bright little fellow and hobbles about on short wooden pegs.

This morning Leslie Oren, the deaf and blind boy, found him sitting on the steps on the boys' side of the building. As is Leslie's custom he felt all over the boy to make his acquaintance. When he came to his legs he stopped quickly and said, "Where are your legs?" He was told by another person that the boy had lost his legs by a street car. Leslie looked very sad and said, "I am very sorry for you; you cannot run. I am blind, but I can run. Have you many friends?" When told that the boy had friends in Cincinnati, Leslie said, "I will be your friend."

In a few moments they were met on the walk, Leslie leading the boy without legs. When asked where they were going Leslie said, "I am taking him a walk. I want to show him the fish in the fountain and where the flowers were; they are all gone now, but they will come again next year and he can see them then." And on they went, the boy without sight or hearing trying to drive away the feeling of homesickness from the boy without legs, and the light in the face of the latter showed how much he was appreciating this little act of kindness from one at least as unfortunate as himself.—[Columbus, Ohio, Dispatch.]

THE SCHOOL FOR THE DEAF IN THE PHILIPPINES.

Miss Delight Rice, who made such an enviable reputation in instructing the deaf, dumb and blind boy, John Riley Porter, and who afterwards was employed by the government to instruct the deaf and dumb in the Philippine Islands, is adding more laurels to her reputation in the Philippines.

She left Columbus several months ago for the Islands, and for the first three months after landing she had no pupils. The government about came to the conclusion that there were no deaf and dumb on the island. However, she finally obtained one pupil, and she made such progress with this one, that she now has 22, the oldest being 14 years of age.

She states in her letters to her parents that the pupils all learn rapidly and that she believes that there is a great future in store for her on the island. The Chinese government has made her several flattering offers to teach in the empire, but she has declined all of them, owing to the fact that she has contracted with the United States government, and the further fact that she believes there are more opportunities for advancement in working for Uncle Sam.

Miss Rice states that there are fully 2,000 deaf and dumb on the island, and that she has no doubt but that the deaf and dumb school there will soon be much larger than the one in Columbus. She says that Secretary Taft's visit has awakened much interest in the work, and that people are now making every effort to send their children. The great drawback is that the government only furnishes the schooling. The friends of the unfortunate must pay their board, and as in most cases they are poor, it is an impossibility for them to send their children. This will be remedied during the coming summer, as the Federal government has determined to build dormitories and take charge of all pupils that may come.

Miss Rice has her hands full in taking care of 22 pupils herself, but believes that within a year she will reap the reward of hard work by being made superintendent of the school when it reaches the magnitude expected. She says that they will soon need ten teachers.

Miss Rice will have three months' vacation, commencing with March, and she expects to spend it in China.—[Columbus, Ohio, Evening Dispatch.]

The very presence of some men is an inspiration, and their words are a slogan to urge us on to better, nobler, and more concentrated action. So we feel when Dr. Albert C. Hill, Inspector of Special Schools of the Department of Education comes around. He spent the 16th, 23d, and 24th of October with us, visiting the school rooms and industrial departments. He urged us to make speech more and more the means of communication, to let every recitation be a language lesson to teach English upon every conceivable opportunity, to have our pupils master one thing thoroughly before passing on to the next, to get into closer touch with the public schools, and to follow courses mapped out in the syllabus for elementary schools.—[Deaf Mutes' Register, (N. Y.).]

Dr. Coughlin, in the Teachers' Meeting, gave out the list of duties expected from the members of the staff for the year, and spoke of his recent request that the use of the sign-language be eliminated from the class rooms, especially from the senior classes. The importance of this had been borne in upon him, not only from his own observations when visiting schools in other places, but by correspondence and interviews with the superintendents of those schools which had risen to prominence among those whose graduates had shown proficiency in the use of the English language. The request, therefore, appealed to himself as one which would in the future produce effects very desirable in the education of the deaf, and one which he felt sure would be readily acceded to by those concerned.—[Canadian Mute.]

LESLIE OREN'S VISIT TO CHICAGO.

As guests of Miss Mary McCowen, so widely known as the head of the McCowen School for Deaf Children, and superintendent of Oral Instruction in the Public Schools of Chicago, Leslie and his teacher, Mrs. Cureton, spent a delightful week in the largest inland city in the world last week.

Miss McCowen and Miss Bingham had thoughtfully planned the week's program so that there was scarcely an hour not filled with some entertainment, or something of educational value to Leslie. Leslie was continually surprising his new friends by his large fund of general information. At dinner the first evening, he asked his hostess if she bought her fine veal cutlets at the immense Chicago meat market. A new breakfast food (roasted Wheat Berries) pleased him greatly. He asked if Wheat Berries were more plentiful in Chicago than in Ohio, because Illinois produces more wheat than any other State in the Union.

He was more than pleased when he found that one of his greatest desires—to ride on an elevated road—was to be gratified. It is safe to say, that after his first trip, he knew more about height, width, speed, material, construction, power, etc., than half the people know who take the trip daily. Losing his hat when automobiling was rather enjoyable to him, as it introduced him to the strong lake breeze he so much desired to meet. When we reached the lake, it was glorious! But poor Leslie could have no conception of how those huge waves leaped up and dashed against the rocky beach. Miss Bingham, in her eagerness to give him some idea, did not notice a great wave creeping toward them until it suddenly broke almost at their feet, completely covering them with its spray. It was a pretty damp experience, but Leslie has learned how a breaker "breaks."

When visiting the carpenter, printing and other shops, all were surprised at his acquaintance with tools, machinery, and his knowledge of their uses. Leslie was shown a carpet loom Monday afternoon. He wanted to learn at once how to weave. Miss Beaman explained the different steps to him, and by Friday noon he had woven at odd times a four-foot rug which he is now proudly exhibiting to his friends.

Leslie derived more valuable knowledge from the clay-modeling, wood-carving and the museum at the Chicago University than from any other source. He was particularly interested in the stuffed animals and fowls, the minerals, and metals, and the various specimens of handicraft.

The tall buildings of the world hold a great interest for him. When he found that we would go up in the highest commercial building (Montgomery & Ward) in the world, he was very happy. He wanted to know if the people, horses and wagons on the street 394 feet below looked very like toys.

Two entertainments were given in which Leslie appeared and won his audience at once. The other children on the program were deaf oral pupils of Miss McCowen's, and under the direction of Miss Bingham did beautiful work, the dances, ball, and rhythm work being particularly attractive. These little deaf babies (the eldest aged four years) gave an astonishing exhibition of speech-reading and articulation.

Leslie won friends everywhere. We were repeatedly told that to see him so smiling and cheery, under his double affliction, was a lesson to all; that his eagerness to learn and his powers of concentration had been an inspiration to the hundreds of school children before whom he appeared; that the people of Chicago who have come to know him personally, consider it a rare privilege—a blessing in a way—to have met our little lad.—[Ohio Chronicle.]

Mr. L. M. Larson has resigned his position as instructor in the department of the deaf at St. Olaf College, Northfield. After a few weeks' trial, he found that the requirements were such that he could not meet them, mainly in the matter of teaching foreign languages. For the present the deaf students are being taught by the regular professors of the College.—[Companion (Minn.).]

SPEECH AND LIP-READING.

The question as to what proportion of the deaf can be taught to speak with a reasonable degree of success has been much discussed by those interested for many decades past, and is still a moot question among the teachers of the deaf. There are those who say that practically all the deaf can and should be taught to speak, while others would not go nearly so far in the application of this method. Whichever contention may be correct as to percentages, on one point educators of the deaf almost unanimously agree, and that is that a large proportion—most say at least one half—of the deaf can be successfully so taught. This is no longer a mere theory or an Utopian dream, but a demonstrated fact. In nearly every American institution, as well as in most of the Canadian ones, from forty to ninety-five per cent. of the pupils are now being instructed in oral classes, and the almost universal tendency is to increase the proportion.

The results of this method, where systematically and intelligently applied, has produced very satisfactory results. Perhaps we could quote no stronger evidence of this than that of James Kerr Love, M. D., of Glasgow. He last year visited all the best schools for the deaf in Europe and America on purpose to make a careful study of deaf-mutism, and, not being a partisan advocate of any method, was in a specially good position to judge of all methods impartially. In his report of his investigations he says:

"Comparing the oral with the combined schools of America, I found that the best results and the most intelligent pupils were the product of oral teaching. I think that the orally taught deaf of the United States are the best taught deaf in the world. I am referring to the finished product, when the child leaves the Institution, and I am referring to general intelligence and fitness for the work of life."

The purpose of oral instruction is not only to teach the pupils to articulate distinctly, but also to understand what is being said to them by the motions of the speaker's lips and other vocal organs. This would seem to be a very difficult feat to accomplish, yet it is marvellous how expert many of the deaf become in doing this. In this connection the following excerpt, from the report of a visit made officially to a large number of American Institutions by a teacher from Germany, will be interesting:

"All pupils were so perfectly trained in lip-reading as I found nowhere else. First I thought that all had united and conspired to deceive me, but soon I became ashamed of such a thought, for I learned that it was the systematic teaching of lip-reading in the American schools that bore such splendid results. It seemed to me that the daily exercises in lip-reading, which are independent of the lessons in articulation, and the aim of which is to supply the children from the very beginning with ideas they ought to have according to their age, were of a highly intellectual value. I was excessively astonished at the children's power of perception and combination, though they were not spoken to in a slower manner than to hearing children. By these exercises the little ones grow, as it were, into the language."—[Canadian Mute.]

A superintendent of a school for the deaf usually has certain methods which he wishes to be used. His school may be oral or it may be manual, or it may be something else. He usually has some policy which he would like to have carried out, and in order that the best results may be obtained, he must have the united co-operation of his teachers. It may happen that one or more of his teachers do not believe in the methods he wishes to employ, and therefore are merely passive or even oppose him indirectly. The plain duty of these teachers is to get into line with energy and enthusiasm, but failing in that, to get out. The good of the school demands either one or the other.—[West Virginia Tablet.]

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EDITORIAL COMMENT.

"THE AMERICAN INSTITUTIONS FOR THE EDUCATION OF THE DEAF."

In this issue we give the closing chapter of Prof. Ferreri's interesting and valuable series of papers on "The American Institutions for the Education of the Deaf." Published originally in book form in the Italian language, the work was, at the request of the editor of the REVIEW, translated by the author into English for the benefit of American readers. It did not require the completion of the work, nor, indeed, advancement in its presentation beyond the first chapter, to make plain the fact that the republication was to be abundantly justified, both in the intrinsic interest of the subject-matter and in its superior excellence as a literary production. The profession is to be congratulated, we feel, and the work of deaf education for all time is likewise to be felicitated upon this rich addition to the none too extensive literature of our special pedagogy. As is known, Prof. Ferreri spent the greater part of two years in this country, devoting his entire time and energies to research and study of American schools and systems. An expert himself along the lines of his study, there was little that escaped his eye or his keen intellect, and that he has not put into its proper setting and perspective in his narrative. It would be difficult to estimate the full value of Prof. Ferreri's work, now completed, for it is unique from every point of view, and time is needed to give it its own place and perspective as a factor in our present-day and future pedagogy. Moreover, where there are so many forces operating and influences at work to a given end, it is quite possible to magnify any one of them unduly; but we do not think that we overstate when we say that Prof. Ferreri's work, in all that it covers of wide research, profound study, expert analysis, and mature judgment, has produced a deep impression upon the profession, and that it has contributed largely to give direction and force to the movement now in progress throughout the country, which is so pronouncedly away from those things and influences in our system of deaf education which he found to disapprove, and toward those things in the system which he saw to praise and commend. The work is essentially history,

and it will serve history well for all its uses, as presenting in its narrative that happy combination of description, analysis, and criticism that brings the reader and student to the same nearness of view and plane of understanding enjoyed by the original observer and writer, and for this reason, if for no other, it will have, as may be conceived, high and permanent place in the literature of our American pedagogy. It will be a gratification to our readers to know that the work is soon to be brought out in book form, making it thus available for library uses. Further information regarding its issue may be obtained by communicating with the Volta Bureau. F. W. B.

"THE VISIBLE SPEECH PIONEER."

Searching through the library of the Volta Bureau not long since, there was unearthed from that storehouse of material relating to the Deaf some numbers of an unique magazine entitled "The Visible Speech Pioneer," which, upon examination, revealed the fact that it was a serial publication in manuscript, "conducted by A. Graham Bell," for use in the "School of Vocal Physiology," which he was carrying on in Boston, during the year—1874—in which it was issued. A glance through the pages of the several numbers shows that its contents includes—in addition to much matter of value to teachers, given in ordinary script—a large number of articles and stories written in Visible Speech. With it in view that our readers may have a glimpse into this mine thus uncovered, we present elsewhere a page taken from the collection of stories, which, from the illustration (after the drawing accompanying the original text), will be easily recognized as a familiar fable. Naturally, in this first presentation of anything of the kind in our own pages, mechanical difficulties have been encountered which have rendered it impossible to reproduce the fable exactly as it appears in the original manuscript page—written, as we have reason to believe, by Dr. Bell himself, though his absence from the United States at this time makes it impossible for us to be absolutely certain of this point. Still, the reproduction follows very closely the original form, and, we feel sure, it will, in some of its features, be suggestive to teachers of the deaf of ways and methods of using Visible Speech reading matter with their pupils, to the attainment of very practical and desirable results. It is our hope to follow this, in future issues, with other stories in Visible Speech, for the uses to which they may be put by teachers in carrying on their work. F. W. B.

DR. CROUTER ROUNDS OUT TWO SCORE YEARS OF SERVICE.

In our Institution Press Department is given a brief life sketch of Dr. Crouter, the honored President of our Association and Superintendent of the Pennsylvania Institution, at Mt. Airy; also well-written estimates of him by two associates in the profession of many years' acquaintance with him. The immediate inspiration of the articles was the recent celebration of the fortieth anniversary of Dr. Crouter's entrance upon the work of the education of the deaf, an occasion when his scores of friends in the school over which he presides, and other scores outside, gathered to do him honor and to give him testimony of the high regard in which he is held by them. The published reports of the celebration—which seems to have included several gatherings, with the offering of testimonials of regard in sundry material forms—gave absent friends reading them pleasure only second in measure, we feel sure, to that of those present. For our own part, we were particularly pleased to note the part taken in the celebration by the adult deaf—graduates and former pupils of the school—evidencing as it did so strongly the respect and affection that they hold for their old instructor and superintendent whose teachings and influence have been so potent a force in shaping their lives and character. We echo the hope, we feel assured, of all who know Dr. Crouter that full another score of years of service in the great work he is conducting are in store for him.

F. W. B.

"COURAGE," A NEW PUBLICATION FOR THE DEAF.

This is the title of a new publication, of which two numbers have reached us. It announces itself as devoted to the interest of the deaf and hard of hearing, but more specifically "(1) to bring cheer and courage into lives that under their deafness tend to become morose and morbid; (2) to bring the deaf into as nearly normal relations as possible with others, to wean them from a too common belief that they are a peculiar people, and to teach them that deafness bravely borne is not a mark of difference, but a distinction." All this is certainly a worthy mission, and we have no doubt the new magazine will accomplish much in the line of its aim. Its name is a happy one and appropriate, for there is certainly no class of persons who need courage more than do the deaf or, to put it another way, in whom diffidence or timidity is a more serious handicap. We wish

the new paper the largest possible success in its chosen field of work. It is a monthly, to be issued ten times a year, at the subscription price of 50 cents, and it can be obtained by addressing The Surdus Publishing Company, 156 Fifth Avenue, New York City.

F. W. B.

THE ASSOCIATION REVIEW is a publication of the American Association to Promote the Teaching of Speech to the Deaf. It is sent free to Active Members of the Association. Active membership is obtained upon payment to the Treasurer of the membership fee of two dollars ($2), or its equivalent in foreign currency—8s. 4d. in English money; 8m. 2pfg. in German money; 10fr. 2c. in French money; 7 kr. 50 ore. in Norwegian, Swedish, and Danish money; and 10l. 2c. in Italian money. Postal money orders should be drawn on Washington, D. C., in favor of F. W. Booth.

Teachers wishing positions and Superintendents wishing teachers may avail themselves of the office of the General Secretary of the American Association to Promote the Teaching of Speech to the Deaf, so far as it may be of service to them. The General Secretary aims to keep a list of teachers, and one of Superintendents, belonging to the above classes, ready for use by any person who may write for them.

A new edition of the work on "Formation and Development of Elementary English Sounds," by Caroline A. Yale, has been published by the Association, and it can now be supplied upon application to the General Secretary. Price for single copies, 25 cents.

Reprints in pamphlet form of "My List of Homophenous Words" (words that look alike on the lips), by Emma Snow, may be obtained through the office of the General Secretary. Price for single copies, 25 cents.

Copies of "The Mechanism of Speech," by Alexander Graham Bell (second edition, with Synopsis and Index added), on sale at $1.20 per copy. Address orders to F. W. Booth, General Secretary, 1525 35th St., N. W., Washington, D. C.

Tongue manipulators, used by articulation teachers, for sale. Price, 40 cents each. Address the General Secretary.

COURAGE

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